

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Shelter Deck having a tonnage opening aft

Port of Survey Plymouth

Date of Survey 27th & 28th June 1933

Name of Surveyor A. T. Thomas

Particulars of Classification + 100 A.1. Shelter deck with freeboard
S.S. Reg No 2. 38.

Ship's Name PENELOPE (Type of Superstructures.)
New Georgia

Nationality and Port of Official Number Panama 140645

Gross Tonnage 6566

Date of Build 1919.8

Moulded Dimensions: Length 411.50 Breadth 55.46 Depth 28.62

Moulded displacement at moulded draught = 85 per cent. of moulded depth 12148 tons

Coefficient of fineness for use with Tables .766

Depth for Freeboard (D)

Moulded depth 28.62

Stringer plate03

Sheathing on exposed deck
 $T \left(\frac{L-S}{L} \right) =$ ✓

Depth for Freeboard (D) = 28.65

Depth correction

(a) Where D is greater than Table depth
(D - Table depth) R = $(28.65 - 27.43) 3.00$
= + 3.66" ✓

(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) 55.46

Standard Round of Beam = $\frac{B \times 12}{50} =$ 13.31

Ship's Round of Beam = 13.31

Difference 13.31 deficient

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{13.31}{4} \times .0103 = + .03$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	21.92	21.92	9'-5"		21.92
" overhang ...					
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	368.83	368.83	9'-5"		368.83
" overhang aft ...	16.25	12.19	"		12.19
" overhang forward ...					
F'cle enclosed ...					
" overhang ...	4.50	4.28	9'-5"		4.28
Trunk aft ...					
" forward ...					
Tonnage opening aft ...					
" " forward ...					
Total ...	411.50	407.22			407.22

Standard Height of Superstructure	7'-6"
" " R.Q.D.	✓
Deduction for complete superstructure	42.00"
Percentage covered $\frac{S}{L} =$	100%
" " $\frac{S_1}{L} =$	98.97%
" " $\frac{E}{L} =$	98.97%
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	98.73% ✓
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction =	42.00 × .9873 = - 41.46"

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	51.15	1	✓	51.15	82.00	105.00	1	✓	105.00
$\frac{1}{2}$ L from A.P. ...	22.76	4	✓	91.04	20.00	43.00	4	✓	172.00
$\frac{3}{8}$ L " ...	5.62	2	✓	11.24	0	10.75	2	✓	21.50
Amidships ...	✓	4	✓	✓	✓	✓	4	✓	✓
$\frac{3}{8}$ L from F.P. ...	11.25	2	✓	22.50	0	10.50	2	✓	21.00
$\frac{1}{2}$ L " ...	45.53	4	✓	182.12	19.00	42.00	4	✓	168.00
F.P. ...	102.30	1	✓	102.30	96.00	119.00	1	✓	119.00
Total ...	460.35			460.35	+23"				606.50

Mean actual sheer aft = Excess

Mean standard sheer aft

Mean actual sheer forward = Excess

Mean standard sheer forward

Length of enclosed superstructure forward of amidships = C.S.S.

	Standard	Actual
Sheer forward	33.75	31.50
	136.59	126.00
	102.30	119.00
	272.64	276.50

Correction = $\frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{144.15}{18} (.75 - .50) = - 2.03$

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 = 28.65 Ft.
Summer freeboard = 3.33
Moulded draught (d) = 25.32

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6.33 = 6 $\frac{1}{4}$ "
Additions for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$
Tons per inch immersion at summer load water line

T =
Deduction = $\frac{\Delta}{40T}$ inches = 6 $\frac{1}{4}$ "

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	+	-
Depth Correction ...	3.66	-
Deduction for superstructures ...	-	41.46
Sheer correction ...	-	2.03
Round of Beam correction03	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-

3.69 43.49 - 39.80
Summer Freeboard = 40.03

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

Tropical Fresh Water Line above Centre of Disc ...	12 $\frac{1}{2}$ " 315	Tropical Fresh Water Freeboard ...	3'-4" 1016"
Fresh Water Line " " ...	6 $\frac{1}{4}$ " 157	Fresh Water " " ...	2'-3 $\frac{1}{2}$ " 692
Tropical Line " " ...	6 $\frac{1}{4}$ " 157	Tropical " " ...	2'-9 $\frac{3}{4}$ " 857
Winter Line below " " ...	6 $\frac{1}{4}$ " 157	Winter " " ...	2'-9 $\frac{3}{4}$ " 857
Winter North Atlantic Line " " ...	✓	Winter North Atlantic " " ...	3'-10 $\frac{1}{4}$ " 1175

MARKING FORM

RECEIVED

MARKING FORM

RECEIVED

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS

Particulars of fiddley, funnel and ventilator coamings :—

[illegible]

Particulars of Flush Bunker Scuttles:—

hove

Particulars of Companionways:— ~~Tonnage stowing as per enclosed approved plans~~. Ladder led from
House aft on to foreboard deck.

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

6 off
9" x 5"
C.I.
on back deck

8 off
18'00
x 3 7/8
on upper deck

8 off
12'00
x 4 board & remainder
are being made.

Sufficient closing appliances
~~provided~~

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks :—

[illegible]

Particulars of Gangway Cargo and Coaling Ports:—

None.

Penelope

Scupper draining space above the shelter deck :- 4 ft - 2 in discharge

Particulars of Scuppers and Sanitary Discharge Pipes: - thro S. V. from ~~Forward~~ ^{Forward} ~~Scupper~~ ^{Scupper} above freeboard deck ✓. 2-3" discharge without
above valves from scuppers in way of No. 5 Hatch above freeboard deck ✓. 2 on P.S. in way of Deep Tank from Eng. W.C. &
Hospital with S. V. above freeboard deck ✓. in way of No. 3 Hatch on P.S. 2-4 1/2" & 3 1/2" from Main W.C. with S. V. ✓ 1-2 1/2"
thru S. V. above freeboard deck on S.S. from officers bathroom ✓. in way of No. 2 Hatch 2-3" with S. V. from scuppers above
freeboard deck ✓. Draining shelter tween decks: - 12-3 1/2" S. V. fitted abt 18" below freeboard deck ✓.

Particulars of Side Scuttles:—

Particulars of Side Scuttles:— ~~Forecastle space 3-9½" lights on P. & S. sides - one light~~
~~single & to be replaced.~~ Forward stern 10 on P. & 10 on S. sides 9½" lights with
lead lights.

Particulars of Guard Rails :—

Particulars of Guard Rails:— on Fore & after Shelter deck open rails 3' 7" high with 3 bars about 14" apart. ~~From~~ after end of Bridge to after end of midship house 5/16" steel bulwarks 3' 7" high.

Particulars of Gangways, Lifelines, etc. :—

none fitted. Captain states that if weather demands a line is rigged fore & aft.

Particulars of Freeing Arrangements.						
	Length of Bulwark <i>amidships</i>	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well	<i>(84' - 8"</i>	<i>3' 7"</i>	<i>21 $\frac{3}{4}$" x 15 $\frac{1}{2}$"</i>	<i>one</i>	<i>2.3 $\frac{1}{2}$ $\frac{1}{2}$</i>	
Forward well and Well	<i>5' 10 $\frac{1}{2}$"</i>	<i>8' 2"</i>	<i>18" x 18"</i>	<i>one</i>	<i>2.25 $\frac{1}{2}$ $\frac{1}{2}$</i>	

State position of each freeing port { *After Well: Edge of Port from after end of Bridge 35' 5"*
 (E. and A. position and height above deck edge) { *Forward Well: —*
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— *Height above deck 8 $\frac{1}{2}$ ': shutter fitted.*
 Additional area where sheer is less than standard.

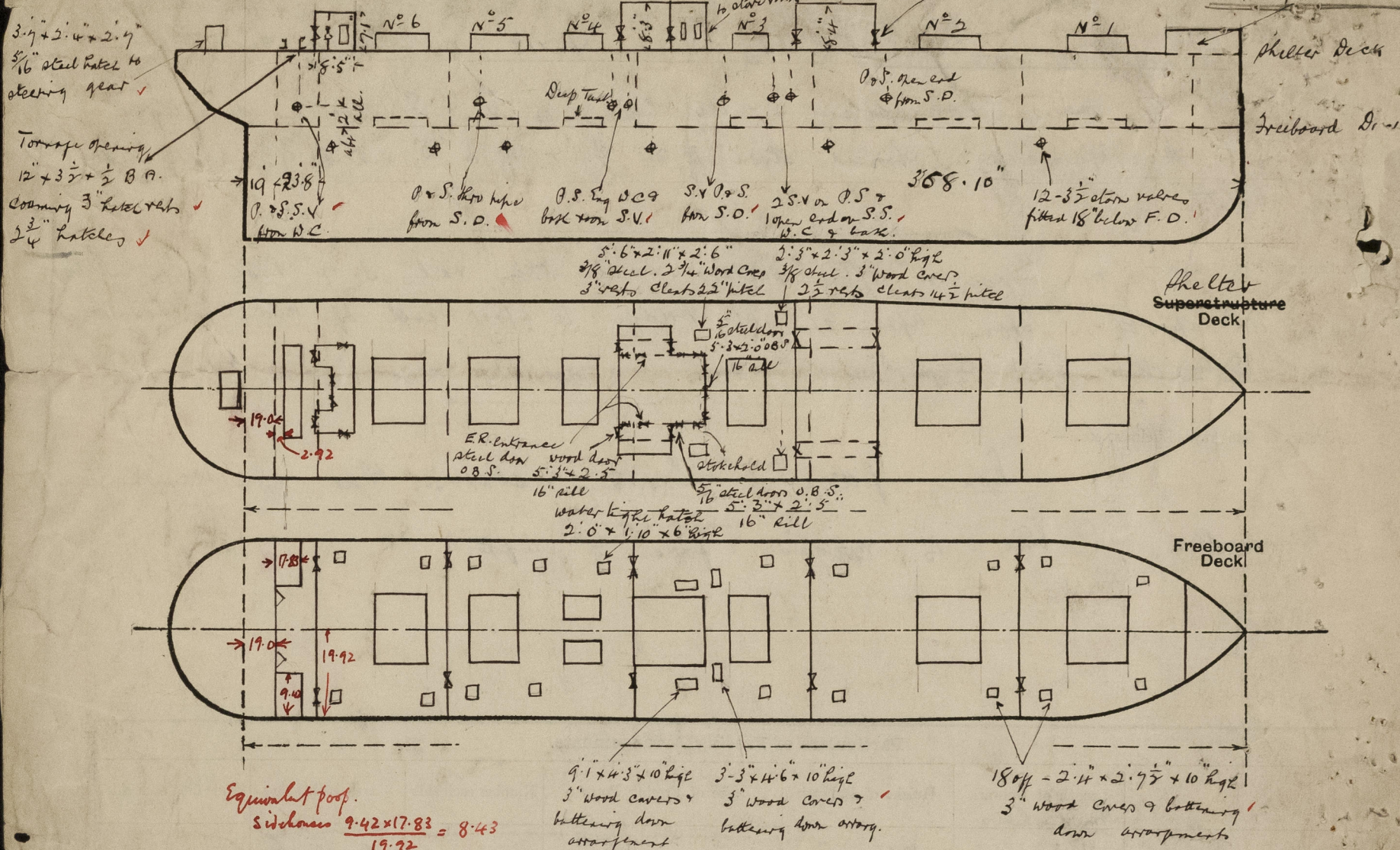
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
After bulk head of Torsoe								
Poop Bulkhead opening... ..	Vertical plating	7/30 ✓	5" x 3" x 1/4" B.A. ✓	33" max ✓	none	5' x 2' ✓	18" ✓	8' 2" ✓
Raised Quarter Deck Bulkhead ...				✓				
Forward Bulkhead of Torsoe	Vertical plating ✓	1/4" ✓	5" x 3" x 3/8" A ✓	31" ✓	none	4' x 3'-1" ✓	18" ✓	8' 2" ✓
Bridge, After Bulkhead opening...								
Bridge, Forward Bulkhead				none				
Forecastle Bulkhead				none cut away 9' 3" 9" steel bulwark left				
Trunk, Aft				none				
Trunk, Forward				none				
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	18" ✓	1/2" ✓	5" x 3" x 5/16" B.A. ✓ 3" x 3" x 3/8" A ✓	30" x 18" ✓	none	none	✓	9' 4" ✓
Exposed Machinery Casings on Super-structure Decks								
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	17" ✓	1/2" ✓	3" x 3" x 5/16" ✓	35" ✓	brackets on top	5' 3" x 2'-1" ✓	18" ✓	8' 3" ✓
Deckhouses on Flush Deck Ships ...				none				

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

After bulk head of Tonnage Poop Bulkhead opening ...	5'6" steel lined doors open both sides ✓
Raised Quarter Deck Bulkhead ...	✓
Port bulk head of Tonnage Bridge, After Bulkhead opening ...	2'6" storm boards fitted full height of opening into 3 1/2" x 1/2" x 1/4" Channels. ✓
Bridge, Forward Bulkhead ...	none
Forecastle Bulkhead ...	none
Exposed Machinery Casings on Free- board or Raised Quarter Decks ...	Engine holt plated on both sides & to opening ✓
Exposed Machinery Casings on Super- structure Decks ...	5" ✓
Machinery Casings within Superstruc- tures not fitted with Class I Closing Appliances ...	To bulk doors O. B. S. on E. R. casing, inside alleyway within steel house ✓ At entrances to machinery casing alleyway on shelter deck here is forward steel door O. B. S. and aft wood door open both sides ✓
Deckhouses on Flush Deck Ships ...	none

Superstructure bulkheads, trunks, deckhouses, casings, cargo and cooling 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 shewn on the following sketches:—

Forecastle cut away to
✓ 3.7" high bulwark.



but T.O. is situated only 2.92' forward of prop.
bullhead; \therefore equivalent length of prop. = $19.0 + 2.92 = 21.92$

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

Shelter deck vessel. Tonnage opening now being cut as per approved plan enclosed. Gunmetal scupper valves being fitted about 18" down from freeboard deck. ✓

Builder's name and yard number.

Harvard & Wolff Lea

Names of sister ships

Owners.

S. Paramythitis Esq

Fee £ 14 . 9 . —

Received by me.