

# Lloyd's Register of Shipping.

## SURVEYS FOR FREEBOARD.

8 JUL 1932

Computation of Freeboard for Steamer, ~~setting ship~~ having Poop, Bridge & Forecastle

(Type of Superstructures.)

Ship's Name	Nationality and Port of Registry	Official Number	Gross Tonnage	Date of Build
PENDENNIS	British Newcastle	129164	2001	1911

Moulded Dimensions: Length 279.33 Breadth 40.25 Depth 20.75

Moulded displacement at moulded draught = 85 per cent. of moulded depth 4465 tons

Coefficient of fineness for use with Tables 788

Port of Survey Newcastle-on-Tyne

Date of Survey 6th July 1932

Name of Surveyor Alex. E. Stevenson

Particulars of Classification +100A1  
S.S. Nov. No. 3-2-24  
S.S. Sd. No. 1-29

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	20.75	(a) Where D is greater than Table depth (D - Table depth) R = (20.80 - 18.62) 2.18 = + 4.68		Moulded Breadth (B)	40.25
Stringer plate	.05	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Standard Round of Beam = $\frac{B \times 12}{50}$	9.66
Sheathing on exposed deck $T \left( \frac{L-S}{L} \right) =$		If restricted by superstructures		Ship's Round of Beam	9.75
Depth for Freeboard (D) =	20.80			Difference	.09
				Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left( 1 - \frac{S_1}{L} \right)$	$\frac{.09}{4} \times \left( 1 - \frac{.194}{.300} \right) = -.01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)	
Poop enclosed	24.66	24.66	7.25	wood dk.	24.66	Standard Height of Superstructure <u>6.29</u>
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure <u>33.93</u>
" overhang						Percentage covered $\frac{S}{L} = 38.54\%$
Bridge enclosed	54.00	54.00	7.0		54.00	" " $\frac{S_1}{L} = 38.35\%$
" overhang aft						" " $\frac{E}{L} = 38.35\%$
" overhang forward	side 33' center 1.50' .16				.16	Percentage from Table, Line A. <u>22.10%</u>
F'cle enclosed	25.67	25.70	7.20	wood dk.	25.70	(corrected for absence of forecastle (if required))
" overhang	2.47	2.60			2.60	Percentage from Table, Line B. <u>26.10%</u>
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required) $22.10 + (4 \times \frac{.194}{.300}) = 25.98\%$
Tonnage opening aft						Deduction = $33.93 \times .2598 = 8.82$
" " forward						
Total	107.66	107.12			107.12	

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	37.93	1		37.93	39	39.00	1		39.00	Mean actual sheer aft = <u>Less</u>
$\frac{1}{4}$ L from A.P.	16.88	4		67.52	18	17.77	4		71.08	Mean actual sheer forward = <u>Less</u>
$\frac{3}{4}$ L	4.17	2		8.34	42	4.44	2		8.88	Mean standard sheer forward
Amidships		4					4			Length of enclosed superstructure forward of amidships = .097
$\frac{1}{4}$ L from F.P.	8.34	2		16.68	10	10.07	2		20.14	" " aft of " = .097
$\frac{3}{4}$ L	33.76	4		135.04	40	40.29	4		161.16	
F.P.	75.86	1		75.86	87	87.00	1		87.00	
Total				341.37					587.26	

Correction =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{45.89}{18} \left( \frac{75-19.27}{2 \times 279.33} \right) = -1.42$

If limited on account of midship superstructure.  $1.42 \times \frac{.194}{.300} = -1.38$  If limited to maximum allowance of  $1\frac{1}{2}$  ins. per 100 ft. ✓

Deduction for Tropical Freeboard.		Deduction for Fresh Water.		TABULAR FREEBOARD corrected for Fresh Deck (if required)	
Addition for Winter and Winter North Atlantic Freeboard.		Displacement in salt water at summer load water line		Correction for coefficient $\frac{.68 + .788}{1.36} = \frac{1.468}{1.36}$	
Depth to Freeboard Deck =	20.80	$\Delta =$	4534	Depth Correction	4.68
Summer freeboard =	3.00	Tons per inch immersion at summer load water line		Deduction for superstructures	8.82
Moulded draught (d) =	17.80	T =	23.25	Sheer correction	1.38
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches =	4.45	Deduction = $\frac{\Delta}{40T}$ inches =	4.87	Round of Beam correction	.07
Addition for Winter North Atlantic Freeboard (if required) =	2			Correction for Thickness of Deck amidships	
				Other corrections, scantlings, etc.	
				Summer Freeboard =	36.08

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

Tropical Fresh Water Line above Centre of Disc	94	Tropical Fresh Water Freeboard	2.24
Fresh Water Line	43	Fresh Water	2.74
Tropical Line	42	Tropical	2.72
Winter Line below	42	Winter	3.42
Winter North Atlantic Line	62	Winter North Atlantic	3.62

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PENDEKNIS

Particulars of fiddley, funnel and ventilator coamings :—

Particulars of Flush Bunker Scuttles:—

none

Particulars of Companionways :—

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

Unshelters constructed in accordance with rules  
Coamings closed with metal or wood plugs &  
canvas covers, ~~except unshelter mounted~~ \*

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

Particulars of Gangway Cargo and Coaling Ports:—

~~none~~ /

From Poop space, Starboard side, line of 1 both discharge thru poop side (RED S.V.) & 1 wash basin discharge thru poop side, with "on/off" cock in pipe.  
Port side: 1 bathing discharge, thru ship's side below foreboard deck, with "on/off" cock in pipe.

From Bridge space. Stand side. 1 w. & 1 both discharge thro. bridge side (NO SV).  
From Pole space. 1 w. discharge port & 1 stand. thro. Pole side (NO SV).

Side Scuttles in Poop, Bridge & Fore sides with hinged deadlights. ✓

Steel bulwarks on freeboard deck in wells, 3-10" high aft well & 3-11" fore well, efficiently constructed & supported.

Guard rails on poops & bridge of Gale;	Poop 3'-0" high with	3 rails & stanchions	4'-6" apart
	Bridge 5'-3" "	3 " "	4'-0" "
	Deck 3'-0" "	2 " "	4'-3" "

~~none~~ (crew in file.)

A manila lifeline has been fitted across the hatches in both wells.

State position of each freeing port ... } After Well:— 3'-6", 29'-9", 46'-0" & 61'-9" from Bridge aft. end.  
(F. and A. position and height above deck edge) } Forward Well:— 2'-8", 17'-9", 33'-9" & 49'-0" from Bridge side entrance } 12" above deck.

State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—  
all well, all ports fitted with hinged steel shutters of large ports have 1 horizontal rod.  
fore well, large ports, 2 horizontal rods, small ports 1 horiz. rod.

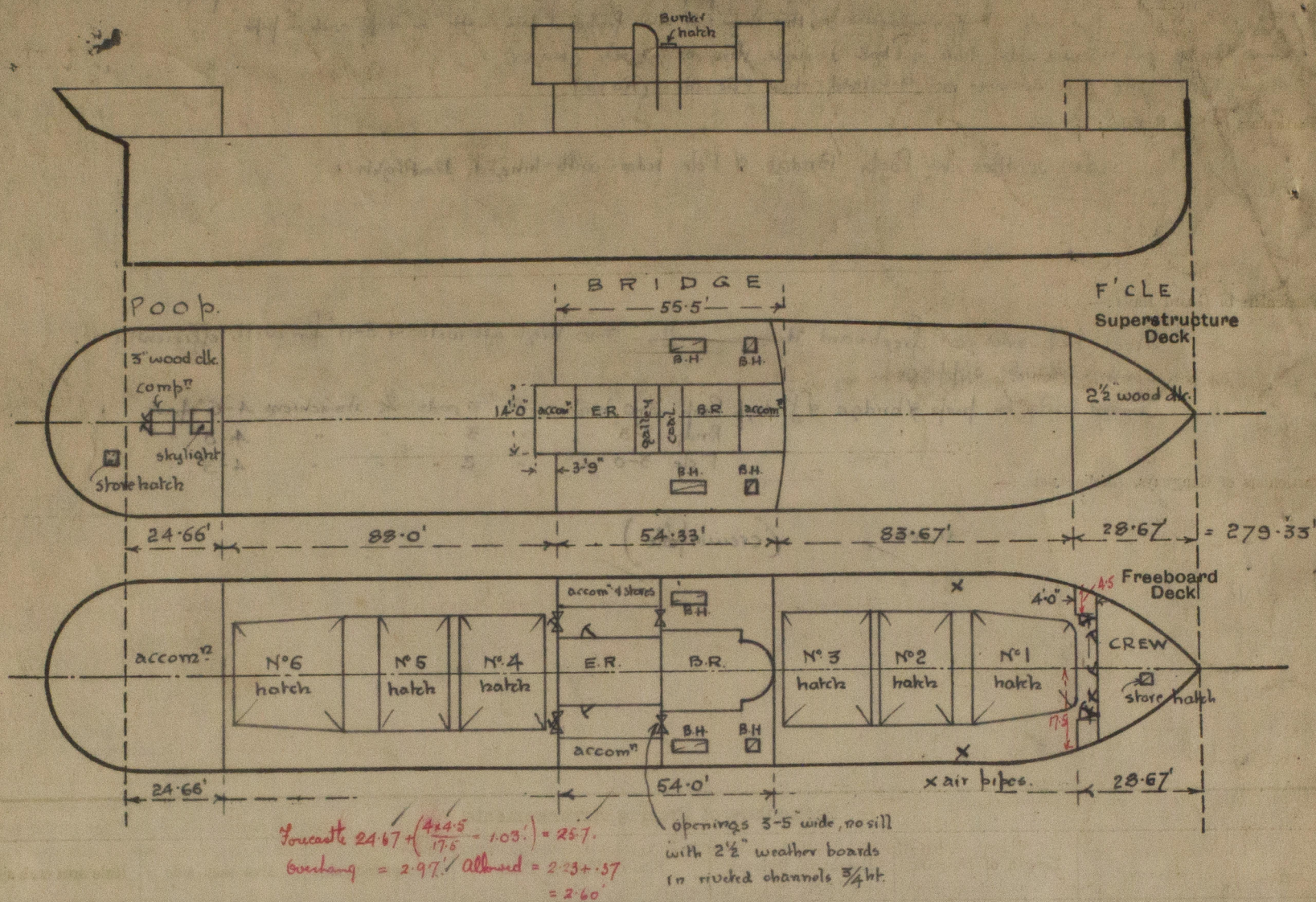
Additional area where sheer is less than standard.

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

Poop Bulkhead	...	...	✓	
Raised Quarter Deck Bulkhead	...	...	✓	3" solid hinged wood doors opening both sides
Bridge, After Bulkhead	...	...	✓	<del>2 1/2" vertical weather boards</del> sides of openings, in 3/4 height <del>wood channel</del> , with 2 1/2" solid hinged wood door in centre of opening, closed by handle both sides.
Bridge, Forward Bulkhead	...	...	✓	
Forecastle Bulkhead	...	...	✓	Hinged solid wood doors (1 1/2" thick), secured both sides by lock & handle.
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	...	...	✓	
Exposed Machinery Casings on Superstructure Decks	...	...	✓	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	...	...	✓	Hinged panelled wood doors. (1 1/2" frame, 1" panel), secured both sides by lock & handle.
Deckhouses on Flush Deck Ships	...	...	✓	



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 shewn on the following sketches:—



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

Timber assignment not required.

Vessel surveyed afloat.

Vessel laid up, & undergoing special survey No 2.

Builder's name and yard number S. P. Austin & Son Ltd. Sunderland.

Names of sister ships

Owners Pendennis S.S. Co. Ltd.

Fee £ 10 : 4 : 0 - Received by me

*Templeton  
Superior  
Sunderland*



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