

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Index No. 21379
(For London Office only.)

12 MAY 1933

Computation of Freeboard for Steamer, Sailing Ship, Tanker

POOP BRIDGE FORECASTLE

Port of Survey ROTTERDAM

(Type of Superstructures.)

Date of Survey 10-5-1933

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

PEARBRIDGE

BRITISH
W. HARTLEPOOL

127463

4014

1911-1

Name of Surveyor

M. van der Weel

Particulars of Classification

100 A1

Moulded Dimensions: Length 359.50 x Breadth 48.66 x Depth 29.41 x 29.375 x
Moulded displacement at moulded draught = 85 per cent. of moulded depth
Coefficient of fineness for use with Tables .790 assumed,

Depth for Freeboard (D)

Depth correction

Round of Beam correction

depth ... 29.375
plate ... 04 x
on exposed deck
(L-S)
L

(a) Where D is greater than Table depth
(D-Table depth) R =
(29.41 - 23.96) 2.765 = + 15.08"
(b) Where D is less than Table depth (if allowed)
(Table depth-D) R =

Moulded Breadth (B) 48.66'
Standard Round of Beam = $\frac{B \times 12}{50}$ = 11.68"
Ship's Round of Beam = 1.00 12"
Difference .32"
Restricted to
Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L})$ = $\frac{.32}{4} \times .5867$ = -.05"

Depth for Freeboard (D) = 29.41'

If restricted by superstructures

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
enclosed ...	24.4	24.40	7.0	x 7.0/7.095	24.07
overhang ...					
D. enclosed					
overhang ...					
ge enclosed...	91.50	91.50	7.0	x 7.0/7.095	90.28
overhang aft ...					
overhang forward					
enclosed square ...	32.67	32.67	7.0	x 7.0/7.095	32.23
overhang ...	SEE SKETCH				
ank aft ...					
forward ...					
age opening aft ...					
" forward					
Total ...	148.57	148.57			146.58

Standard Height of Superstructure 7.095'
" " R.Q.D.
Deduction for complete superstructure 39.30'
Percentage covered $\frac{S}{L}$ = 41.33%
" " $\frac{S_1}{L}$ = 41.33%
" " $\frac{E}{L}$ = 40.78%
Percentage from Table, Line A.
(corrected for absence of forecastle (if required)) 28.16%
Percentage from Table, Line B.
(corrected for absence of forecastle (if required))
Interpolation for bridge less than .2L (if required)
Deduction = 39.30 x .2816 = - 11.07'

SHEER CORRECTION.

Position	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
"	45.45	1		45.45	60.2	60.50	1		60.50
A.P. ...	20.45	4		81.80	31	24.49	4		97.96
"	5.05	2		10.10		6.12	2		12.24
ips ...		4					4		
F.P. ...	10.11	2		20.22		11.95	2		23.90
"	40.90	4		163.60	60.50	47.79	4		191.16
"	91.90	1		91.90	96	108.00	1		108.00
Total ...	3.55			1413.57					493.76

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 = > .10 L,
" " aft of " = > .10 L,

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - S}{2L} \right) = \frac{80.19}{18} \left(\frac{.75 - .2066}{.5434} \right) = -2.42'$

limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Correction for Tropical Freeboard.

Correction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 129.41
Summer freeboard = 5.46
Moulded draught (d) = 23.95

Correction for Tropical freeboard and addition for

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

Correction for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

Δ =

Tons per inch immersion at summer load water line

T =

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

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

Depth Correction ... 15.08'
Deduction for superstructures ... 11.07'
Sheer correction ... 2.42'
Round of Beam correction05'
Correction for Thickness of Deck amidships ...
Other corrections, scantlings, etc. ...

Summer Freeboard = 65.58'

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 5'5 1/2"

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 " " ...

1906 Freeboards re-assigned
Lloyd's Register
For 1933-1934

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway		FOREWELL	AFTERWELL	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE	BRIDGE
Dimensions of Hatchway		15'6" x 22'0"	24'9" x 22'0"	24'9" x 22'0"	15'6" x 22'0"	9'6" x 18'0"	9'6" x 18'0"	9'6" x 18'0"	9'6" x 18'0"
COAMINGS	Height above Deck	3'4"	4'0"	2'6"	2'6"	3'4"	3'4"	3'4"	3'4"
	Thickness Sides	.46"	.50"	.50"	.46"	9'3 1/2" x .42"	.36"	.36"	.36"
	Thickness Ends	.40"	.40"	.40"	.40"	.40"	.36"	.36"	.36"
	Stiffeners								
HATCH BEAMS	Number	4	5	5	4	1	1	1	1
	Spacing								
	Scantling and Sketch			24" x 40"	24" x 40"	24" x 40"	24" x 40"	24" x 40"	24" x 40"
	Bearing Surface			4" x 3" x 40"	4" x 3" x 40"	4" x 3" x 40"	4" x 3" x 40"	4" x 3" x 40"	4" x 3" x 40"
FORE AND AFTERS	Number								
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
HATCH COVERS	Material			PINE					
	Thickness			3"					
	How fitted			LONGITUDINALLY					
	Bearing Surface			3"					
Spacing of Cleats				NOT EXCEEDING 15"					
Number of Tarpaulins				WILL NOW BE COMPLETED					
Are wood fore and afters steel shod at all bearing surfaces?				YES					
Are battens and wedges efficient and in good condition?				YES					
Are tarpaulins in good condition and in accordance with rule requirements?				WILL NOW BE COMPLETED					
Are lashings provided in accordance with rule requirements?				MANILLA LASHINGS. 3 RINGS EACH SIDE 4 MAIN HATCHWAYS					

Particulars of fiddle, funnel and ventilator coamings:— Offrend casing forms part of offrend bridge. Casing partly exposed on bridge deck. Top fully finished. ventilators. engineering light in good condition. Ventilators have hinged steel covers. Saddleback hatch has a complete battening arrangement.

Particulars of Flush Bunker Scuttles:—

none fitted.

Particulars of Companionways:—

none fitted. Crew berthed in forecabin.

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

Forecabin deck. 4 vents. dia 8 1/2" Coaming 24" x 32". Construction complies with Rules. Wells. 8 " " 14 " " 36" x 40". Wood plugs and canvas covers will now be completed. Bridge deck. 4 " " 11 1/2 " " 36" x 34". Poop deck. 1 " " 8 " " 36" x 34".

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

Forewell. 2 air pipes 303 tanks. 3" x 27". Afterwell. 2 " " 2 1/2" x 33". Wood plugs will be fitted.

Particulars of Gangway Cargo and Coaling Ports:—

none fitted.

Particulars of Scuppers and Sanitary Discharge Pipes — Sanitary discharge pipes lead from scuppers situated above the forehand deck and are fitted with storm valves.

Particulars of Side Scuttles:—

In fore and poop space, of a substantial construction and fitted with hinged steel deadlights.

Particulars of Guard Rails:—

Fore deck. 2 rods. bolted stanchions 33" x 4'1". Bridge deck. 3 rods riveted stanchions 37" x 4'2". Poop deck ditto bridge deck.

Particulars of Gangways, Lifelines, etc.:—

Lifelines are available for use in bad weather in order to ensure safe access to all parts necessary for the crew and for handling the vessel.

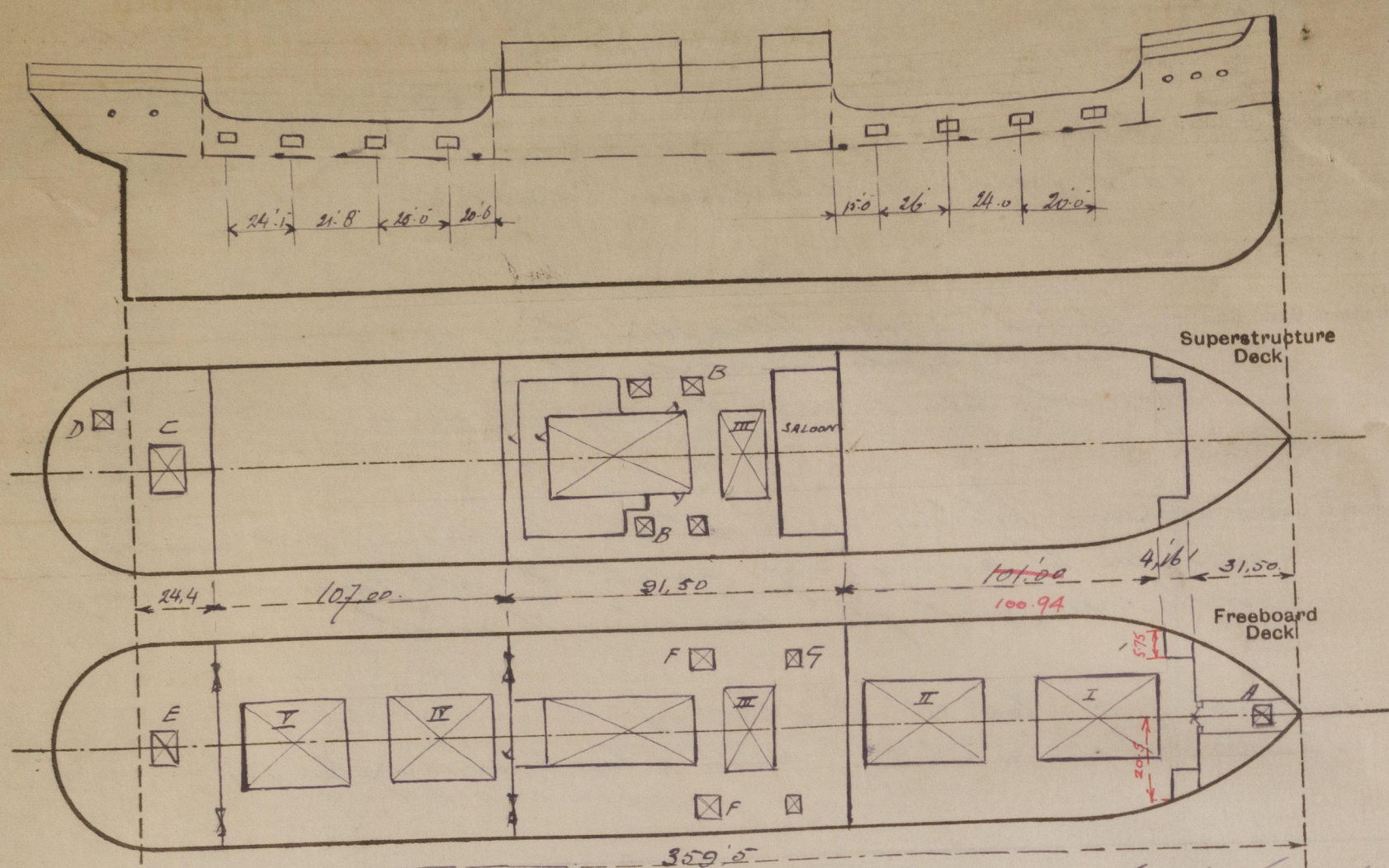
Bulwark. 3'10". Plate. 25". Profile 6" B.A. Stanchions 17 1/2" x 4'0" x 6'5". Double & lugs to stringer plate 4'3 1/2" x 36". Rivets.

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	107.00	3'10"	3'4" x 1'9"	4	13.32/sq ft	21.4/sq ft
Forward Well	101.00	3'10"	3'0" x 1'5"	4	10.43/sq ft	20.2/sq ft
State position of each freeing port (F. and A. position and height above deck edge) After Well:— 17' Forward Well:— 17'						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:— 2 horizontal bars						
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	24" x 44"	.40"	3 1/2" x 3 1/2" x 48"	32"		6'4" x 3'3"	0'3"	
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	24" x 38"	.34"	3" x 3" x 36"	3'10"		4'8" x 3'3"	23"	
Bridge, Forward Bulkhead	24" x 44"	.40"	3 1/2" x 3 1/2" x 56"	30"	LOOKS BOTTOM AT TOP. ALTERN LUGS OR BRASS CENTRAL PARTIAL DOOR 4'0" x 6'0"	NONE		
Forecabin Bulkhead	VERTICAL	.30"	COULD NOT BE ASCERTAINED				9 1/2"	
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	24" x 38"	.34"	3 1/2" x 3" x 36"	3'7"		4'7" x 2'0"	22"	7'0"
Exposed Machinery Casings on Superstructure Decks	18" x 44"	.26"	4 1/2" x 2 1/2" x 32"	3'6"		4'0" x 2'0"	18"	7'0"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	17" x 40"	.36"	4 1/2" x 2 1/2" x 32"	3'6"		NONE		
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	3" Stanchions in "c" over full height.
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	Portable steel door on hook bolts, passing through plate floor only.
Bridge, Forward Bulkhead	no openings
Forecabin Bulkhead	Ordinary hinged wood door closing central alleyway.
Exposed Machinery Casings on Freeboard or Raised Quarter Deck	Ordinary hinged steel door, operated from both sides.
Exposed Machinery Casings on Superstructure Decks	Ordinary hinged steel door, operated from inside.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
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 shown on the following sketches:—



The Owners hereby request you to assign also a timber freeboard with a view to examine the conditions of assignment. The steering leads are not protected in the afterwell. There are no sockets, no eyeplates, no holes for lashings, no lashings, no compass way on forehead. Only ER & B.R. tank are subdivided, but ER tank State any special features in the construction of the ship: It is connected to bilgepump only.

Hatch A in fore alleyway 4'0" x 4'0" Coaming 9 1/2" x 36"
4 Coalhatches B on bridge deck 4'0" x 3'0" Coaming B.A. 9" x 3" x 40"
Prop hatch C 8'0" x 6'1" Coaming 12" x 36"
Store hatch D 2'0" x 2'0" Coaming 9" x 36"
Peak hatch E 3'10" x 3'10" Coaming B.A. 9 1/2" x 3" x 40" Wood cover and efficient balling arrangement
2 Coalhatches F in bridge space 4'0" x 3'0"
2 Escape hatches G in bridge space 2'6" x 1'10" Coaming B.A. 9" x 3" x 40" Complete balling arrangement

$$\text{Forecastle} = 31.5 + \frac{5.75 \times 4.16}{20.5} = 32.67$$

Coalshoot goes to bridge space only.

Builder's name and yard number Northumberland S. B. Co. Ltd. Newcastle.
Names of sister ships
Owners North of England S. S. Co. Ltd (Crosby, Son & Co. Ltd Mgrs)
Fee £ 153.00. Received by me

Rotterdam 11th May 1933

M. van der Neel



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