

ORT BOWEN
25276
Rpt. C.11.

WRECK SECTION

Lloyd's Register of Shipping.

Index. No. **28189**
(For London Office only.)

No. **566**

SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker
having Complete Superstructure and Tonnage Opening.

Port of Survey LONDON

Date of Survey 4 - 6 APRIL 1932

Name of Surveyor G. SCANTLEBURY

Particulars of Classification 100A1
Sheltered with freeboard.

(Type of Superstructures.)

Ship's Name <u>Port CAROLINE</u>	Nationality and Port of Registry <u>BRITISH LONDON</u>	Official Number <u>143790</u>	Gross Tonnage <u>8263</u>	Date of Build <u>1919</u>
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Moulded Dimensions: Length 479.33 Breadth 62.0 Depth 35.67
Moulded displacement at moulded draught = 85 per cent. of moulded depth 19165 tons
Coefficient of fineness for use with Tables .744

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <u>35.67</u>	(a) Where D is greater than Table depth (D - Table depth) R = <u>(35.71 - 31.96) x 3 = +11.25</u>	Moulded Breadth (B) <u>62.0</u>
Stringer plate <u>.04</u>	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =	Standard Round of Beam = $\frac{B \times 12}{50} = \frac{62 \times 12}{50} = 14.88$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	If restricted by superstructures	Ship's Round of Beam = <u>15.1</u>
Depth for Freeboard (D) = <u>35.71</u>		Difference <u>.62</u>
		Restricted to
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.62}{4} \left(1 - \frac{.995}{1} \right) = \text{NIL.}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed	<u>74.37</u>	<u>74.37</u>	<u>8'-7"</u>	<u>✓</u>	<u>74.37</u>
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed					
" overhang aft					
" overhang forward					
Fore enclosed	<u>400.3</u>	<u>400.30</u>	<u>8'-7"</u>	<u>✓</u>	<u>400.30</u>
" overhang					
Trunk aft					
" forward					
Tonnage opening aft	<u>4.66</u>	<u>2.33</u>			<u>2.33</u>
" forward					
Total	<u>479.33</u>	<u>477.00</u>			<u>477.00</u>

Standard Height of Superstructure 7'-6"

" " R.Q.D. ✓

Deduction for complete superstructure 42.00

Percentage covered $\frac{S}{L} = \frac{100}{100} = 100$

" " $\frac{S_1}{L} = \frac{99.5}{100} = 99.5$

" " $\frac{E}{L} = \frac{99.5}{100} = 99.5$

Percentage from Table, Line A. 99.38
(corrected for absence of forecastle (if required))

Percentage from Table, Line B. ✓
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required) C.S.S.

Deduction = 42.00 x .9938 = -41.74

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.	<u>57.93</u>	1		<u>57.93</u>	<u>39.11</u>	<u>51.0</u>	1		<u>64.00</u>
1/4 L from A.P.	<u>25.78</u>	4		<u>103.12</u>	<u>37.6</u>	<u>22.12</u>	4		<u>113.92</u>
" "	<u>6.37</u>	2		<u>12.74</u>	<u>36.1</u>	<u>5.53</u>	2		<u>14.08</u>
amidships	-	4		-	<u>35.9</u>	-	4		-
3/4 L from F.P.	<u>12.74</u>	2		<u>25.48</u>	<u>36.10</u>	<u>11.85</u>	2		<u>26.62</u>
1/4 L "	<u>51.56</u>	4		<u>206.24</u>	<u>40.0</u>	<u>47.39</u>	4		<u>215.40</u>
F.P.	<u>115.86</u>	1		<u>115.86</u>	<u>45.0</u>	<u>108.0</u>	1		<u>121.00</u>
Total				<u>521.37</u>					<u>555.02</u>

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{.75 - \frac{S}{2L}}{.25} \right) = \frac{33.65}{18} \left(\frac{.75 - .50}{.25} \right) = -.47$

If limited on account of midship superstructure. C.S.S.

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

Mean actual sheer aft = access.
Mean standard sheer aft = access.

Mean actual sheer forward = access.
Mean standard sheer forward = access.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient <u>744 + .68</u> <u>1.424</u>
Depth to Freeboard Deck = <u>35.71</u>	$\Delta = \frac{18945}{1000} = 18.945$	<u>1.36</u> <u>1.36</u>
Summer freeboard = <u>5.81</u>	Tons per inch immersion at summer load water line	
Moulded draught (d) = <u>29.90</u>	$T = \frac{60.7}{1000} = 60.7$	
Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = <u>7.47</u> <u>7.2</u>	Deduction = $\frac{40T}{1000}$ inches = <u>7.80</u> <u>7.4</u>	
Addition for Winter North Atlantic Freeboard (if required) = <u>✓</u>		

Depth Correction	<u>11.25</u>	<u>-</u>
Deduction for superstructures	<u>-</u>	<u>41.74</u>
Sheer correction	<u>-</u>	<u>.47</u>
Round of Beam correction	<u>-</u>	<u>-</u>
Correction for Thickness of Deck amidships	<u>-</u>	<u>-</u>
Other corrections, scantlings, etc.	<u>-</u>	<u>-</u>
	<u>11.25</u>	<u>42.21</u>
Summer Freeboard =		<u>69.66</u>

96.10
100.62

87.8
14.4.32

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

Tropical Fresh Water Line above Centre of Disc	<u>15.4</u>	Tropical Fresh Water Freeboard	<u>5'-9 3/4"</u>
Fresh Water Line " "	<u>7.4</u>	Fresh Water " "	<u>5'-2 1/2"</u>
Tropical Line " "	<u>7.5</u>	Tropical " "	<u>5'-2 1/4"</u>
Winter Line below " "	<u>7.2</u>	Winter " "	<u>6'-5 1/4"</u>
Winter North Atlantic Line " "	<u>✓</u>	Winter North Atlantic " "	<u>✓</u>

Port Caroline

Particulars of fiddle, funnel and ventilator coamings:— Stokhold gratings covered by ^{hinged} ~~portable~~ steel ~~bolts~~ plates
Fidley and ventilation of efficient condition. Engine Room Drylight of steel strongly constructed ✓

Particulars of Companionways: - Steel door 24" x 69" sill 18" high fastened both sides with clamps. at after end of Popo House gives access to Store below Greenboard Deck. and to Cross alphas in Shelter Deck Space. Wood door 17 1/2" thick closed from both sides. sill 18" gives access to Tunnel Escape in Popo House. - Wood door 13 1/2" thick closed from both sides. sills 15" in steel bulkheads of Engine room accommodates quick access to Engine Room. - Steel door. clamp fastened operated both sides. sill 26" in after bulkhead of Forenettle gives access to Shelter Deck Space. - Similar door with sill 20" one at after end of engine room casing and one at fore end of Popo House gives access to Shelter Deck Space. - Double steel hinged door. clamp fastened operated both sides. Sills 15" in casing in very Bras Bumber Hall. -

Furniture or ventilators in exposed positions	on	decks and superstructure decks:-
2 Vents on Forecastle Deck 20' x 16" high	G.H.	HOLD.
14 " " "	"	"
2 " " "	"	Bugie Room.
2 " " "	"	"
2 " " "	"	FAV ROOMS.
1 " " "	"	"
2 " " "	"	STORE.

Cell vents fitted with wood plugs and canvas.

30 ein Papier u. 1 helles Lech. $2\frac{1}{2}$ die 22 hoch

Efficient means of closing
provided

3 W.T. Cargo Door P. 98. between Foreboard and Main Decks in way of No. 1, 2, and 4 Holds. ✓
2 - Bowling Port P. 98. in Shelter Deck Space amidships ✓
These doors are apparently constructed and well secured. ✓

Particulars of Scupper and Sanitary Discharge Pipes —
2 gal pipes fitted with B.S. storm valves and waste pipe starts side off.
5 scupper pipes P.S. amidships from Shelter Deck Space. No storm valves fitted. Blaced with wood plugs.

Particulars of Guard Rails:— On forecable 39' high 3 bars. Bandwires spaced 5-0' ✓
 " Shell & Deck 46' " 4 " " 5-0' ✓
 Bulwarks amidships in way of deckhouses 45' high strongly constructed ✓

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			18" X 18" —	1 —	1.25 sq ft —	
TONNAGE SPACE						
Forward Well						

State position of each freeing port { After Well :—
(F. 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 :—

Additional area where sheer is less than standard.

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	3" WOOD PLANKING in Riveted Channels, <i>full height</i>
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	✓
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	3" WOOD PLANKING in Riveted Channels - <i>full height</i>
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	
Exposed Machinery Casings on Super-structure Decks	13 1/4 Inch Doors hinged and operated from both ends, and steel hinged doors operated from both ends ✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	Steel doors operated from both ends, latched ✓
Deckhouses on Flush Deck Ships ...	

