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(For London Office only.)

Rpt. C.11.

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

V/S 27.10 1932

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having Funnel and Bridge

(Type of Superstructures.)

Ship's Name MONARCH OF BEAMUDA Nationality and Port of Registry London Gross Tonnage 22424 Date of Build 1931-11

Moulded Dimensions: Length 550' Breadth 76'-6" Depth 43'-3 1/2"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 32065 tons

Coefficient of fineness for use with Tables. 725

Port of Survey New York

Date of Survey June 3, 1932

Name of Surveyor W. Bennett

Particulars of Classification + 100 A1

with freeboard

limited for oil fuel 11300

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	43'-3 1/2"	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	76'-6"
Stringer plate	1/2" (1705/160)	(43'-3 1/2" - 36'-6") 5'-0" = + 20'-0"		Standard Round of Beam = $\frac{B \times 12}{50}$	18'-36"
Sheathing on exposed deck	1/2" (1705/160)	(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	
T $\left(\frac{L-S}{L}\right) = (-125 \times 1856)$				Difference	13'-36"
Depth for Freeboard (D) =	43'-34"	If restricted by superstructures		Restricted to	
				Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L}\right)$	$\frac{13.36^2}{4} \times 1928 = + 64"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Pop enclosed						Standard Height of Superstructure
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure
" overhang						Percentage covered $\frac{S}{L} = 81.44\%$
Bridge enclosed	351.33	351.33	8'-1"		351.33	" " $\frac{S_1}{L} = 80.72\%$
" overhang aft						" " $\frac{E}{L} = 80.72\%$
" overhang forward	2.58	1.29			1.29	Percentage from Table, Line A.
F'cle enclosed	88.64	88.64	8'-0"		88.64	(corrected for absence of forecastle (if required))
" overhang	5.36	2.68			2.68	Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than 2L (if required)
Tonnage opening aft						Deduction = $42.00 \times .7619 = - 32.00$
" forward						
Total	447.91	443.94			443.94	

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	65.00	1		65.00	46.5	49.50	1		49.50	Mean actual sheer aft = Deficient.
1/4 L from A.P.	28.93	4		115.72	21.6	21.72	4		86.88	Mean actual sheer forward = Deficient.
1/4 L "	7.15	2		14.30	5.4	5.43	2		10.86	Mean standard sheer forward
Amidships	1	4		4			4			Length of enclosed superstructure forward of amidships =
3/4 L from F.P.	14.30	2		28.60	13.6	13.67	2		27.34	" " aft of " =
3/4 L "	57.85	4		231.40	54.8	54.70	4		218.80	
F.P.	130.00	1		130.00	107.5	107.50	1		107.50	
Total				585.02					500.88	

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(75 - \frac{S}{2L} \right) = \frac{84.14}{18} \left(75 - 40.72 \right) = + 1.60"$$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 43'-44"

Summer freeboard = 16'-48"

Moulded draught (d) = 26'-96"

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6'-74" = 6'-3 1/4"

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 22170$

Tons per inch immersion at summer load water line

T = 81.44

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

= 6'-3 1/4"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{68 + 725}{1.36} = 1405$

Depth Correction

Deduction for superstructures

Sheer correction

Round of Beam correction

Correction for Thickness of Deck amidships

to correspond to approved Winter Draught of 26'-6"

Other corrections, scantlings, etc.

Summ. Freeboard = 116'-40"

120'-25"

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

Winter North Atlantic Line

Tropical Fresh Water Freeboard

Fresh Water

Tropical

Winter

Winter North Atlantic

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS												
Description of Hatchway			No. 1		No. 2							
Dimensions of Hatchway			18 x 12		22 x 14							
COAMINGS	{	Height above Deck	10		10							
		Thickness	Sides	1/4		1/4						
			Ends	1/4		1/4						
		Stiffeners	B.A. 6 x 1 1/2 x 10		7 x 1 1/2 x 10							
		Brackets, Stays	One		Two							
HATCH BEAMS	{	Number	2		3							
		Spacing	6' 0"		5' 5"							
		Scantling and Sketch	7" x 1 x 20		4 x 1 x 42							
			5 1/2 x 1 1/2		1 1/2 x 1 1/2							
			4 x 1 x 100		4 x 1 x 42							
Bearing Surface	1		1									
FORE AND AFTERS	{	Number										
		Spacing										
		Unsupported Lengths										
		Scantling and Sketch	None									
		Bearing Surface										
HATCH COVERS	{	Material	wood		wood							
		Thickness	1/4		1/4							
		How fitted	F.A.		F.A.							
		Bearing Surface	1		1							
Spacing of Cleats			2'		2'							
Number of Tarpaulins			1		3							

wood fore and afters steel shod at all bearing surfaces? *Yes*
 Pattens and wedges efficient and in good condition? *Yes*
 Tarpaulins in good condition and in accordance with rule requirements? *Always & waterproofed*
 Gaskets provided in accordance with rule requirements? *Yes No. 1*
Yes No. 2

Funnel, funnel and ventilator coamings:— *To fidley, the funnels are riveted to and fully protected by a strong steel housing on the line. There are no openings in sides of funnels. There are no E.R. skylights. The E.R. vents are eight each 48" diam. They are fixed and staged. The A.R. vents are in forced draught, 2 x 2. There are four of these to each stokehold (8 in all).*

Have

Particulars of Companionways:— *Green companionway on Forecastle Deck. Steel hinged w. T. door (60" x 26"), with 16" sill. The door has two steel lugs, & is operable from either side.*

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *Ventilation system to Passeng accommodation is all by thermotank system, with directional louvers in all staterooms. Vents on 4" (B) deck forward, are all 16" coamings. In forward well (C), and 20" on A & C decks aft, where exposed vents are fitted with wood covers and canvas covers.*

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *All airpipes from F.W. and double tanks, and deep tanks, are 6" dia. and discharge thru ship's side just below 'C' deck, with cork float ball valves at outlet from O.F. tanks are 6" diam. and are led up mainmast. (see drawing) funnel. To wood plug provided.*

Gangway Cargo and Coaling Ports:— *In B-C tween decks, there are two passing doors each side. There are in hatches, and have two strong bars each door. There are 12 doors to each deck. In C-D tween decks, there are five doors each side, all some 2' x 2'.*

The weather decks are scuppered by overboard discharge pipes, led thro' ship sides, and fitted with storm valves at overboard ends. At forward and after ends (exclusive of accommodation) sanitary pipe discharge thro' ship sides with S.O. valves extension ends, all brass. All passenger accommodation pipes lead into ADAM'S system tanks. These discharge overboard by means of dual ejectors thro' one line to each tank, with brass closed down valves at ship sides, and in addition flapper valves are fitted on each line.

Best steel deadlights are fitted on all portlights, and conveniently stowed nearby for use when required.

4 1/2" plate bulwarks fitted at forward and after ends of forecastle deck; open rails between (4 rods). Stay to bulwark spaced about 5 ft. apart, rail 6" R.A. (See sketch).

On aft end of "B" and "C" decks, there are 4 1/2" plate bulwark stiffeners 7 1/2" apart, with open rails around them (5 rods).

Handrails are fitted to houses on all promenade decks.

Particulars of Freeing Arrangements.

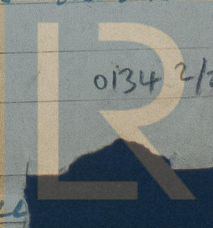
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
Well.	The space between forecastle and bridge is completely closed on the ship sides, and has large ports with strong steel w.t. covers. One cargo door is fitted on each side, strong steel s.w.t. strongback on each door.					
Forward Well.	No freeing ports.					
State position of each freeing port			After Well:—			
(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:— ✓						
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
Roop Bulkhead ...	✓							
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead ...	✓	7/16	ALL LINED	✓		NONE	✓	8' 3"
Bridge, Forward Bulkhead ...	✓	3/8	5 x 3 x 1/2 R.A.	12	LOGS TRD.	72" x 30"	14"	8' 1"
Forecastle Bulkhead ...	✓	1/2"	4 x 3 x 1/2 OA	28	none	63" x 38"	10"	8'
Trunk, Aft ...	✓							
Trunk, Forward ...	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Not exposed.							
Exposed Machinery Casings on Superstructure Decks ...	Not exposed.							
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).

Roop Bulkhead ...	✓
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead ...	✓
Bridge, Forward Bulkhead ...	One steel w.t. door, closed by two steel dogs, operable from both sides.
Forecastle Bulkhead ...	2" N.W.T. steel doors, bolt on outside.
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks ...	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances ...	✓
Deckhouses on Flush Deck Ships ...	Strong steel w.t. doors - 12 steel

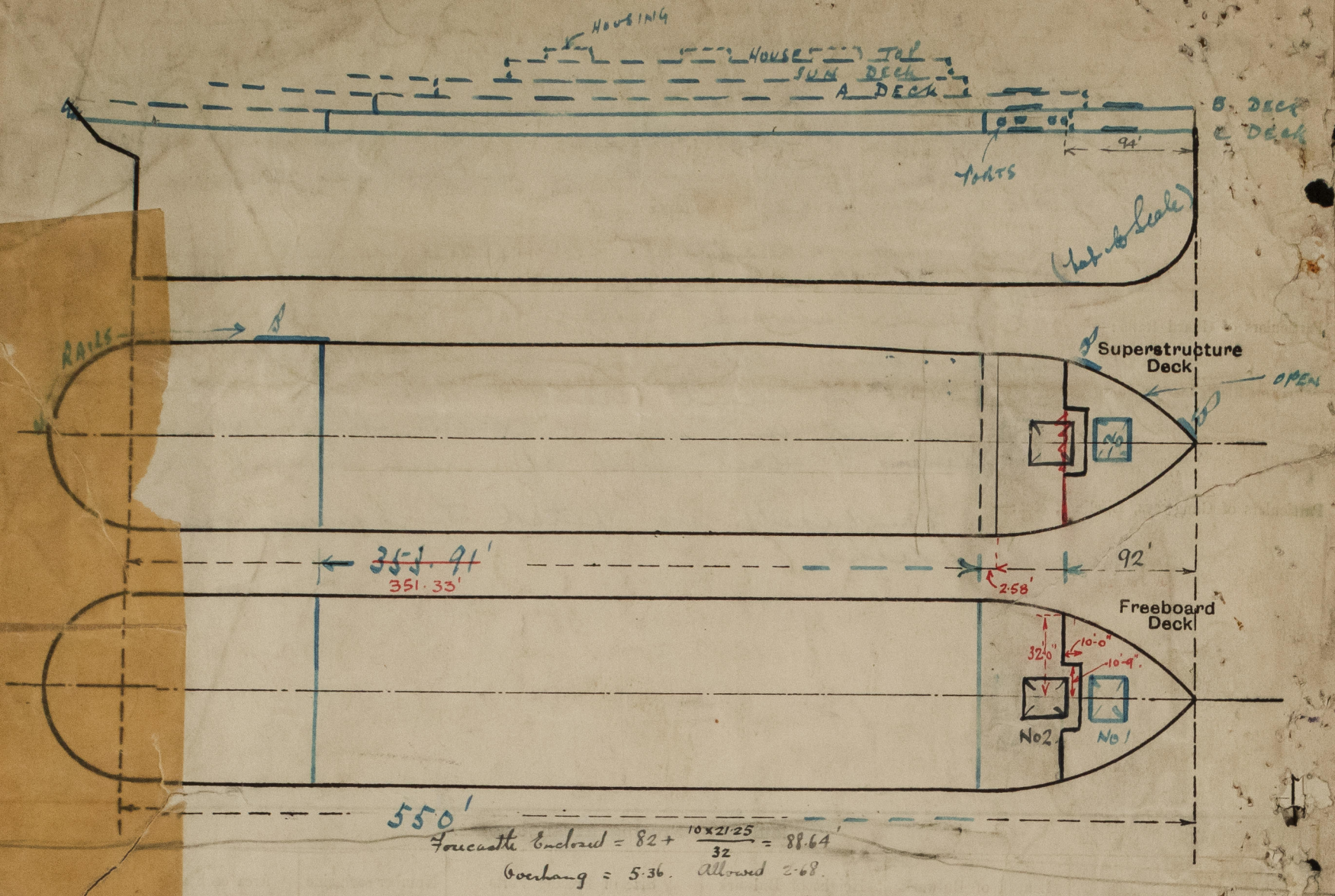


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Monarch of the Sea

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:—



State any special features in the construction of the ship:— This vessel was examined while lying at anchor at pier 95, North River, New York.

$\Delta @ 24 \text{ ft draft} = 19,140 \text{ tons}$
 $" " 26-5\frac{1}{2} " = 21,600 "$
 $T.P.J. @ 24 \text{ ft draft} = 81.44$

} Taken from Owners' Plans.

[Large handwritten signature]

Builder's name and yard number *Vickers Armstrong Co. Newcastle*
 Names of sister ships *Two "Queen of Bermuda"*
 Owners *Harman Wadby & Co. Ltd.*

Fee $\$130.00$
 $\$2.50$
 Received by me

Blair & Co. New York.