

Lloyd's Register of Shipping

SURVEYS FOR FREEBOARD - STEAMERS

(Under the Provisions of the U. S. A. Load Line Act of March 2, 1929)

New York Office Index No. 148
 Port of Survey Philadelphia
 Date of Survey Feb 14 1933
 Name of Surveyor R. Marshall

30035

Ship's Name " Birkenhead "	Port of Registry and Nationality New York U.S.A.	Official Number 221700	Gross Tonnage 6960	Date of Build 1921-10	Particulars of Classification +100A1. Carr. fut in bulk. S.S. Ph. No 2-30
S.S. M.S.	Number in Register Book... 58411	Builder... Moore S.B.C.	Moulded dimensions 425.0 x 57.0 x 33.0 (85% = 28.05)	Moulded displacement at a moulded draught of 85 per cent. of moulded depth... 156.10 x .995 = 155.35	Hull No... 166
Owner... Standard... Transp. Co.	Coefficient of fineness for use with tables... 800				

DEPTH FOR FREEBOARD.		CORRECTION FOR DEPTH.		CAMBER	
Moulded depth	33.00	(a) When D is greater than $\frac{L}{15}$		Standard	$\frac{57 \times 12}{50} = 13.68$
Stringer plate	.625	$(D - \frac{L}{15}) \times R = (33.05 - 28.33) \times 3 = +14.16$		Ship	14.00
Sheathing in wells		(b) When D is less than $\frac{L}{15}$ (if allowed).		Difference	.32
$T \left(\frac{L-S}{L} \right) =$		$(\frac{L}{15} - D) \times R =$		Restricted to	✓
Depth D =	33.05	If restricted by height of superstructures		Allowance = $\frac{\text{Difference}}{4} \times (1 - \frac{S}{L}) = \frac{.32 \times .5}{4} = -.04$	

SUPERSTRUCTURES.

	Mean Covered Length S	Effective Length S ₁ (Uncorrected for Height)	Height.	Correction for Height.	Effective Length.
Poop enclosed	105.75	105.00	7.5	✓	105.00
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	40.00	40.00	7.5	✓	40.00
" overhang aft	8.00	6.00			6.00
" overhang forward	2.00	1.00			1.00
F'cle enclosed	41.25	41.25	7.5	✓	41.25
" overhang					
Trunks forward					
" aft					
Tonnage opening					

Sheer aft.
 56.0 1 56.0
 20.0 3 60.0
 - 3 -
 - 1 -
 116.0

Standard Sheer Aft.
 52.50 1 52.50
 23.34 3 70.02
 5.83 3 17.49
 - 1 -
 140.01

TOTAL = $\frac{197.00}{194.00}$
 Length of ship (L) = 425
 % Covered... = 46.35%
 Corresponding %, corrected for absence of forecastle if required } A = Tanker
 Allowance ... = 42.0

$\frac{194.00}{425} = 45.64\%$
 Correction for Bridge less than 2L if required } Tanker: does not apply.
 = -15.39

SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1	56.00	52.50	56.00	1	56.00
2	20.00	23.34	20.00	4	80.00
3	-	5.83	-	2	-
4	-	-	-	4	-
5	21.75	11.67	21.75	3	43.50
6	64.25	46.66	64.25	4	257.00
F.P. 7	127.00	105.00	127.00	1	127.00

If excess sheer forward and deficient sheer aft:-
 $\frac{\text{Actual sheer aft}}{\text{Standard sheer aft}} = \frac{116.0}{140.01} = 82.85\%$
 $\frac{\text{Actual sheer forward}}{\text{Standard sheer forward}} = \text{excess}$ sheer forward

Mean effective sheer ... = 18) 563.50
 Standard sheer .05 L + 5 = 31.30
 Difference (Df) = 26.25
 Allowance = $Df \times \left(.75 - \frac{S}{2L} \right) = 5.05 \left(.75 - .232 \right) = 2.62$
 If limited on account of amidship superstructure ... = ✓
 If limited on account of excess sheer (1 1/2 in. per 100 ft.) ... = ✓

Length of enclosed superstructure L
 Forward of amidships = } Tanker does not apply
 Aft of amidships = }

DRAFTS.

Moulded Depth D =	33' - 0"
Stringer Plate = (or Wood Deck)	1/2"
Freeboard	33' - 0 1/2"
Moulded draught	5' - 10 3/4"
Addition for keel below base line	2 1/4"
Extreme draught	27' - 4"

F. W. ALLOWANCE

Displacement = 15060
 Tons per inch = 49.67
 $\frac{15060}{40 \times 49.67} = 7.58$

TABULAR FREEBOARD (corrected for flush deck if required)

Corrected for Coefficient	$\frac{800 + .68}{1.36} = 68.65$
Correction for Depth	14.16
Superstructures	15.39
Sheer	2.62
Camber	.04
Thickness of deck	-
Scantlings, etc.	-
Summer Freeboard =	70.81

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, upper Deck:-
 Tropical Fresh Water Line (above center of Disc) 1 1/4"
 Fresh Water Line " " " 7/8"
 Tropical Line " " " 6 3/4"
 Winter Line (below " ") 6 3/4"
 Winter North Atlantic Line " " " 11"

Tropical Fresh Water Freeboard ... 4' - 8 1/2"
 Fresh Water " ... 5' - 3 1/4"
 Tropical " ... 5' - 4"
 Winter " ... 6' - 5 1/2"
 Winter North Atlantic " ... 6' - 9 3/4"

MARKING FORM RECEIVED 16 FEB 1933

17/2/33

1000-1003

Note:—The Rules referred to below are the Load Line Regulations of the United States Department of Commerce.
(These should be consulted when completing the report.)

Is the poop or raised quarter deck connected with the bridge? No
 Has the poop or raised quarter deck an efficient steel bulkhead at the fore end? Yes
 Give particulars of the means of closing the openings in this bulkhead (Rules 43 and 44) Two hinged steel water tight doors
 Has the bridge an efficient steel bulkhead at the fore end? Yes
 Give particulars of the means of closing the openings in this bulkhead Two hinged steel water tight doors
 Has the bridge an efficient steel bulkhead at the after end? Yes
 Give particulars of the means of closing the openings in this bulkhead Two hinged steel water tight doors
 Has the forecastle an efficient steel bulkhead at the after end? No: open
 Give particulars of the means of closing the openings in this bulkhead
 Are the engine and boiler openings covered by a bridge, poop, raised quarter-deck, or enclosed by a strong steel deckhouse? Covered by poop
 If the openings are not so protected, are the exposed parts of the casing efficiently constructed? Yes
 Give thickness of plating, scantlings and spacing of stiffeners
 Are Rules Nos. 19, 20, 21 and 22 complied with (where applicable)? Yes. Hinged steel door in machy-casing 20" sill

Particulars of bulkheads of erections:

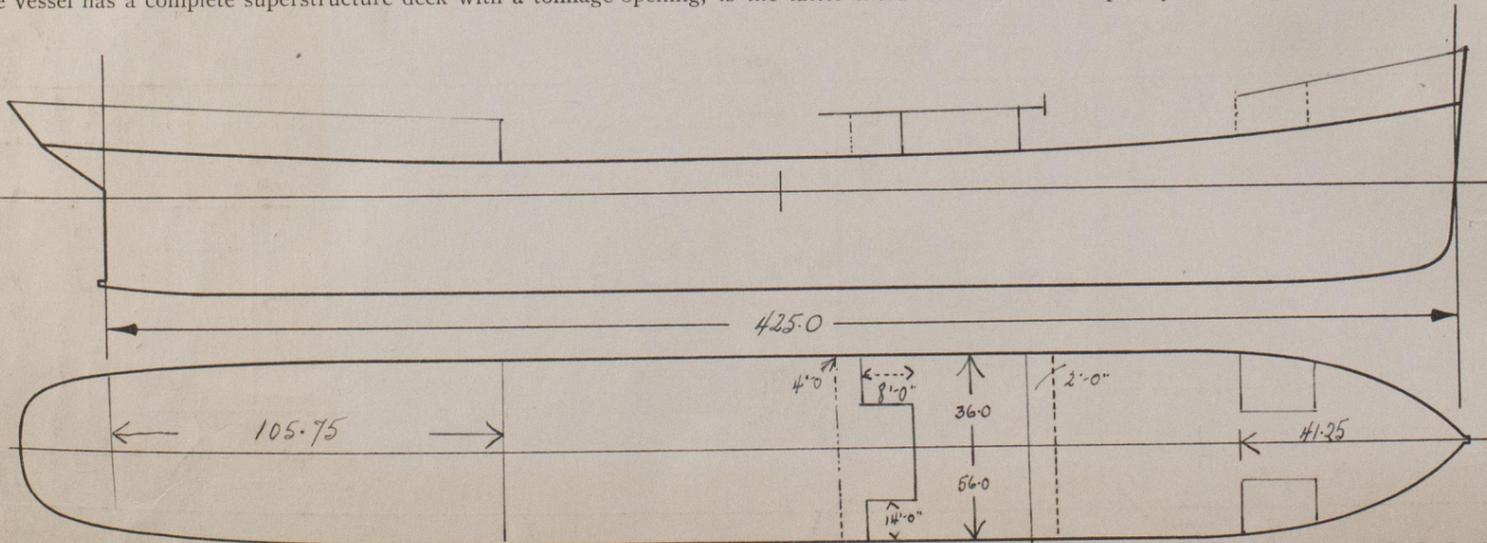
	Poop or Raised Quarter-Deck bulkhead	Bridge front bulkhead	Bridge after bulkhead	Forecastle bulkhead
Thickness of bulkhead plating	7/16"	Scaming 1/2" Bulkhd 7/16"	3/8"	
Scantlings of stiffeners	L 10 x 3 3/8 x 3 3/8 x .43	L 8 x 3 1/2 x 3 1/2 x .48	L 5 x 3 x 3/8"	
Spacing of stiffeners, and if bracketed	24" to 36"	36" Bracketed	36" not bracketed	
Height of sills of openings above deck	21"	22 1/2"	18 1/2"	

Particulars of weather deck hatchways. (In case of complete superstructure vessels having tonnage openings, give, in addition, particulars of 2nd deck hatchways, and also of those in bridge spaces closed by Class 2 appliances, or in open bridges).

Position and Size.	No. 1 8'-8" X 14'-0"		20 O.T. Hatches 6'-0" X 4'-0"		10 O.T. Hatches 4'-0" X 2'-4"		Hatches on Poop 6'-0" X 6'-0"		Ship.	Rule.
	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.		
COAMING										
Height above top of DECK	24"		8"		8"		18"			
Thickness	Sides.....	.44	L 8 x 3 1/2 x 7/16		L 8" x 3 1/2" x 7/16		.38			
	Ends.....	.44	-		-		.38			
SHIFTING BEAMS OR WEB PLATES.	Number.....	1	-		-		-			
	Section and Scantlings.....	11 12 x 3/8	-		-		-			
	Material.....	11 L 3 x 3 x 7/16	-		-		-			
* FORE AND AFTERS.	Number.....	-	-		-		-			
	Section and Scantlings.....	-	-		-		-			
	Material.....	-	-		-		-			
HATCHES Thickness	<u>3/8"</u>		17/32		17/32		3"			
Remarks.....	<u>Steel</u>		<u>Steel Stiffened</u>		<u>Steel Stiffened</u>		<u>Wood</u>			

* The depth of Fore and Afters should be stated from the underside of the hatches in all cases.

Are Rules 12, 13, 14, 15, 16, 17, 18 complied with as far as practicable? Yes
 Are hatchway coamings stiffened in accordance with Rule 9? Yes
 Length of bulwarks in wells—forward: 116' feet; aft: 118' feet.
 Area of freeing ports required by regulations (Rules 30 and 100) forward: Open rails for hull length of exposed deck sq. ft.; aft: length of exposed deck sq. ft.
 Particulars of freeing ports fitted on each side of vessel
 forward well } None = _____ sq. ft.
 after well } None = _____ sq. ft.
 Are Rules 23 and 24 complied with as far as practicable? Yes
 Are air pipes to tanks in accordance with Rule 25? Yes
 Are all scuppers and sanitary discharge pipes in accordance with Rule 27? Yes
 In oil tankers, what is the extent of the fore and aft gangway? All fore & aft Are the crew berthed in the forecastle? (Rule 96) No
 Is the gangway strong and efficiently braced fore and aft? Yes State spacing of supports 9.5 feet average
 In oil tankers, are the bulwarks open for at least half the length of the exposed portion of the weather deck? (Rule 100) Yes
 Are Rules Nos. 95, 97, 98 and 99 complied with as far as practicable? Yes
 If the vessel has a complete superstructure deck with a tonnage opening, is the latter fitted with efficient temporary covers? Yes



Indicate thickness and extent of any deck covering, and extent of erections, with dimensions, showing overhang (if any).
Indicate position of scuppers from tonnage-exempted spaces above freeboard deck.

Sister vessels: "Gargoyle" "Vacuum"

Fee: \$90.00 Expenses (if any) \$3.00

(Signed)

O. Warbitt
Surveyor to Lloyd's Register of Shipping.

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Foundation