

MALLARD

Lloyd's Register of Shipping

SURVEYS FOR FREEBOARD - STEAMERS

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

25207-9 APR 1936
New York Office Index No. 237
Port of Survey. NEW YORK
Date of Survey. 23rd Jan., 1936
Name of Surveyor. H. G. House

S.S. **"AMERICAN CARDINAL"**
M.S. Number in Register Book. 20164
Port of Registry and Nationality. NEW YORK U.S.A.
Official Number. 232352
Gross Tonnage. 3804
Date of Build. 1917-7
Particulars of Classification. +100 A1
Owner. American Cardinal S.S. Corp.
Builder. Union Iron Works
Hull No. 17
Moulded dimensions 341 x 48 x 27.25 (85% =)
Moulded displacement at a moulded draught of 85 per cent. of moulded depth Tonnage Coeff. = .81 + .015 = .825 8795
Coefficient of fineness for use with tables .825 812

DEPTH FOR FREEBOARD.		CORRECTION FOR DEPTH.		CAMBER	
		$\frac{L}{15} = 22.73$		Standard $\frac{48 \times 12}{50} = 11.52$	
Moulded depth	27.25	(a) When D is greater than $\frac{L}{15}$		Ship	12.00
Stringer plate	1/2 .04	$(D - \frac{L}{15}) \times R = (27.25 - 22.73) \times 341 = 1530$	- 11.96	Difference	.48
Sheating in wells		(b) When D is less than $\frac{L}{15}$ (if allowed)		Restricted to	
$T \left(\frac{L-S}{L} \right) =$		$(\frac{L}{15} - D) \times R =$		Allowance = $\frac{\text{Difference}}{.594} \times (1 - \frac{S}{L}) =$	-.07
Depth D =	27.29	If restricted by height of superstructures			

SUPERSTRUCTURES.

	Mean Covered Length S.	Effective Length S. (Uncorrected for Height)	Height.	Correction for Height.	Effective Length.
Poop enclosed	29 4 2		7'6"		29 4 2
" overhang					
R.Q.D. enclosed					
" overhang	7 2 9 2		7'6"		7 2 9 2
Bridge enclosed					
" overhang aft					
" overhang forward	3 5 5 0		7'6"		3 5 5 0
F'cle enclosed					
" overhang					
Trunks forward					
" aft					
Tonnage opening					
Total =	137.84	137.84			137.84
Length of ship (L) =	341.00	341.00			341.00
% Covered =	40.42	40.42			40.42
Corresponding %, corrected for absence of forecastle if required A =	38.066	B = 27.86	Correction for Bridge less than 2' L if required = - 10.60		
Allowance =		27.86			

SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1	5 4 0 0	4 4 1 0	5 4 0 0	1	5 4 0 0
2	2 2 1 2	1 9 6 2	2 2 1 2	4	11 0 6
3	5 5 3	4 8 5	5 5 3	2	
4	1 2 0 4	9 7 0	1 2 0 4	4	2 4 0 8
5	4 8 1 9	3 9 2 4	4 8 1 9	4	1 9 2 7 6
6	1 2 3 0 0	8 8 2 0	1 2 3 0 0	1	1 2 3 0 0
F.P. 7					

Mean effective sheer ... = 18) 493.38
Standard sheer .05 L + 5 = 27.41
Difference (Df) = 22.05
Allowance = $Df \times (.75 - \frac{S}{2L}) = 5.36 \times (.75 - .2021) = 5.36 \times .5479 = 2.94$
If limited on account of amidship superstructure ... =
If limited on account of excess sheer (1 1/2 in. per 100 ft.) ... =

If excess sheer forward and deficient sheer aft:-

Actual sheer aft =
Standard sheer aft =
Actual sheer forward =
Standard sheer forward =

Length of enclosed superstructure L

Forward of amidships = .066
Aft of amidships = .148

DRAFTS.		F. W. ALLOWANCE	TABULAR FREEBOARD (corrected for flush deck if required)	
Moulded Depth D =	27' 3"	Displacement =	Corrected for Coefficient $\frac{1.505}{1.36} = 1.107$	53.98
Stringer Plate = (or Wood Deck)	27' 3 1/2"	Tons per inch = 34.3	Correction for Depth ... 11.96	59.73
Freeboard	4' 10"		" Superstructures ... 10.60	
Moulded draught	22' 5 1/2"		" Sheer ... 2.94	
Addition for keel below base line	1 1/2"		" Camber07	
Extreme draught	22' 7 1/4"		" Thickness of deck ...	
			" Scantlings, etc. ...	
				Summer Freeboard = 58.08 = 4' 10"

SUMMER FREEBOARD

amidships from Centre of Disc to top of Deck Line
Tropical Fresh Water Line (above center of Disc)
Fresh Water Line
Tropical Line
Winter Line (below " ")
Winter North Atlantic Line " " "

Upper Deck:-
Tropical Fresh Water Freeboard
Fresh Water
Tropical
Winter
Winter North Atlantic

4' 10"
3' 10"
4' 3"
4' 4"
5' 3"
-

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) Steel Hinged Watertight Door
Has the bridge an efficient steel bulkhead at the fore end? Yes
Give particulars of the means of closing the openings in this bulkhead Steel Hinged Watertight 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 Shifting Boards in Channel Frames
Has the forecastle an efficient steel bulkhead at the after end? Yes
Give particulars of the means of closing the openings in this bulkhead Steel Hinged Doors
Are the engine and boiler openings covered by a bridge, poop, raised quarter-deck, or enclosed by a strong steel deckhouse? Bridge House
If the openings are not so protected, are the exposed parts of the casing efficiently constructed? -
Give thickness of plating, scantlings and spacing of stiffeners -
Are Rules Nos. 19, 20, 21 and 22 complied with (where applicable)? Yes

Particulars of bulkheads of erections:

	Poop or Raised Quarter Deck Bulkhead	Bridge front bulkhead	Bridge after bulkhead	Forecastle bulkhead
Thickness of bulkhead plating	.38	.38	.38	.38
Scantlings of stiffeners	6"x3 1/2"x7/16" B.A.	9"x3 1/2"x5/8" B.A.	5"x3 1/2"x7/16" Angle	5"x3 1/2"x7/16" Angle
Spacing of stiffeners, and if bracketed	30" Bracketed	27" Bracketed	30" No Brackets	27" No Brackets
Height of sills of openings above deck	19"	23"	18"	18"

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).

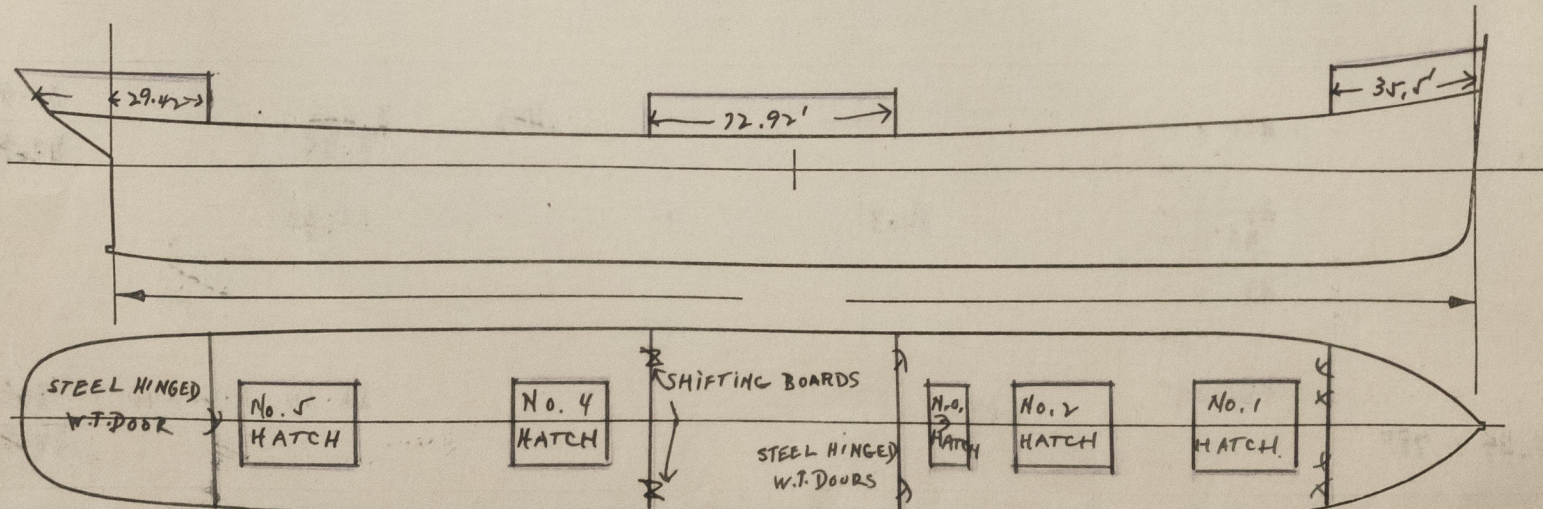
Position and Size.	No.1 25'x17'		No.2 25'x17'		No.3 12'6"x17'		No.4 25'x17'		No.5 25'x17'	
Item.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.
Height above top of DECK	33"		33"		33"		33"		33"	
COAMING Thickness	Sides.....		.44		.44		.44		.44	
	Ends.....		.44		.44		.44		.44	
SHIFTING BEAMS OR WEB PLATES.	Number.....		5		2		5		5	
	Section and Scantlings.....		1.16"x.50 Angles 4"x3"x.44		S A M E		A S N U M B E R O N E			
	Material.....		Steel							
FORE AND AFTERS.	Number.....									
	Section and Scantlings.....				N O N E					
	Material.....									
HATCHES Thickness	3"		3"		3"		3"		3"	
Remarks.....	Good		Good		Good		Good		Good	

* 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: 112.0 feet; aft: 91.3 feet.
Area of freeing ports required by regulations (Rules 30 and 100) forward: 22.4 sq. ft.; aft: 18.25 sq. ft.
No. Ft. × Ft.
Particulars of freeing ports fitted { forward well } 5-3 ft. x 1.5 ft. = 22.5 sq. ft.
on each side of vessel { after well } 4-3 ft. x 1.5 ft. = 18.0 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? - Are the crew berthed in the forecastle? (Rule 96). -
Is the gangway strong and efficiently braced fore and aft? - State spacing of supports - feet. -
In oil tankers, are the bulwarks open for at least half the length of the exposed portion of the weather deck? (Rule 100). -
Are Rules Nos. 95, 97, 98 and 99 complied with as far as practicable? -

If the vessel has a complete superstructure deck with a tonnage opening, is the latter fitted with efficient temporary covers? -



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: _____

Fee: \$60.

Expenses (if any) _____

(signed) H. G. HOUSE

Surveyor to Lloyd's Register of Shipping.

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Foundation