

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. 82  
Port of Survey Philadelphia  
Date of Survey 4th April 1931  
Name of Surveyor O. Nagel

Ship's Name SS. Vacuum  
Number in Register Book 87499  
Port of Registry New York  
Official Number 220165  
Gross Tonnage 7009  
Date of Build 1920-5  
Particulars of Classification +100A1. Carrying pet. in bulk.  
Owner Vacuum Oil Co.  
Builder Messrs. J. B. Co.  
Hull No. 157  
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  
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	6.25	$(D - \frac{L}{15}) \times R = (33.05 - 28.34) \times 3 = +14.13$		Ship	13.12
Sheathing in wells		(b) When D is less than $\frac{L}{15}$ (if allowed).		Difference	56
$T(\frac{L-S}{L}) =$		$(\frac{L}{15} - D) \times R =$		Restricted to	
Depth D =	33.05	If restricted by height of superstructures		Allowance = $\frac{\text{Difference}}{4} \times (1 - \frac{S_1}{L}) = \frac{56}{4} \times .543 = +0.7$	

SUPERSTRUCTURES.

	Mean Covered Length S	Effective Length S <sub>1</sub> (Uncorrected for Height)	Height	Correction for Height	Effective Length
Poop enclosed	105.75	105.75	8.0	✓	105.75
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	36.00	36.00	8.0	✓	36.00
" overhang aft	12.00	10.00			10.00
" overhang forward	2.00	1.00			1.00
F'cle enclosed	41.25	41.25	8.0	✓	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

52.5	1	52.50
23.34	3	70.02
5.83	3	17.49
-	1	-
		140.01

TOTAL = 197.00 194.00 194.00  
Length of ship (L) = 425 425  
% Covered... = 46.35% 45.64% 45.64%  
Correction for Bridge less than 2 L if required } Tanker does not apply  
Allowance = 42.0 x .3664 = -15.39

SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1	56.0	52.5	56.0	1	56.00
2	20.0	23.34	20.0	4	80.00
3	-	5.83	-	2	-
4	-	-	-	4	-
5	21.75	11.67	21.75	2	43.50
6	64.25	46.66	64.25	4	257.00
F.P. 7	127.0	105.0	127.0	1	127.00

If excess sheer forward and deficient sheer aft:-

Actual sheer aft = 116.0  
Standard sheer aft = 140.01 = 82.85%

Actual sheer forward = 140.01  
Standard sheer forward = allow excess sheer fwd.

Length of enclosed superstructure L

Forward of amidships = ✓

Aft of amidships = ✓

Mean effective sheer... = 563.50  
Standard sheer .05 L + 5 = 31.30  
Difference (Df) = 570.5  
Allowance = Df x (.75 -  $\frac{S}{2L}$ ) = 445 (75 - .232) = -2.56  
If limited on account of amidship superstructure = ✓  
If limited on account of excess sheer (1 1/2 in. per 100 ft.) = ✓

DRAFTS.

Moulded Depth D =	33' 0"
Stringer Plate = (or Wood Deck)	1/2"
Freeboard	33' 0 1/2"
Moulded draught	27' 1 1/2"
Addition for keel below base line	2 3/8"
Extreme draught	27' 3 7/8"

F. W. ALLOWANCE

Displacement = 15066  
Tons per inch = 49.67  
 $\frac{15066}{40 \times 49.67} = 7.58$

TABULAR FREEBOARD (corrected for flush deck if required)

Corrected for Coefficient	$\frac{800 + .68}{1.36} =$	68.65
Correction for Depth	14.13	
" Superstructures	15.39	
" Sheer	2.56	
" Camber	.07	
" Thickness of deck	-	
" Scantlings, etc.	18.01	

Summer Freeboard = 70.95

FREEBOARD recommended 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 below	
Winter North Atlantic Line	



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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) 2 Hinged steel w. T. 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 2 Hinged steel w. T. 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 Hinged steel w. T. 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 covered by Poop  
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 yes  
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	<u>7/16"</u>	<u>7/16" Coaming 50</u>	<u>3/8" Coaming 1/2"</u>	
Scantlings of stiffeners	<u>10x3 3/8 x 3 3/8 - 43 Ts</u>	<u>8x3 1/2 x 3 1/2 x 41 Ts</u>	<u>5x3 x 3/8 angles</u>	<u>open</u>
Spacing of stiffeners, and if bracketed	<u>28" yes</u>	<u>36" yes</u>	<u>24 x 36 no</u>	
Height of sills of openings above deck	<u>18"</u>	<u>21"</u>	<u>18"</u>	

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"	22 O.T. Hatches 6'0" x 4'0"	10. O.T. Hatches 4'10" x 2'4"	Ship.	Rule.	Ship.	Rule.
Item.	Ship.	Rule.	Ship.	Rule.			
COAMING. Height above top of DECK	<u>24</u>	<u>8x3 1/2 x 7/16 angles</u>	<u>8x3 1/2 x 7/16 angles</u>				
Thickness	<u>44</u>	<u>✓</u>	<u>✓</u>				
Sides	<u>44</u>	<u>✓</u>	<u>✓</u>				
Ends	<u>44</u>	<u>✓</u>	<u>✓</u>				
SHIFTING BEAMS OR WEB PLATES.							
Number	<u>1</u>	<u>✓</u>	<u>✓</u>				
Section and Scantlings	<u>12 x 3 3/8</u>	<u>✓</u>	<u>✓</u>				
Material	<u>Steel</u>	<u>✓</u>	<u>✓</u>				
* FORE AND AFTERS.							
Number	<u>✓</u>	<u>✓</u>	<u>✓</u>				
Section and Scantlings	<u>✓</u>	<u>✓</u>	<u>✓</u>				
Material	<u>✓</u>	<u>✓</u>	<u>✓</u>				
HATCHES Thickness	<u>1/2" Steel</u>	<u>17/32" steel covers</u>	<u>17/32" steel covers</u>				
Remarks	<u>covers stiffened</u>	<u>stiffened</u>	<u>stiffened</u>				

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

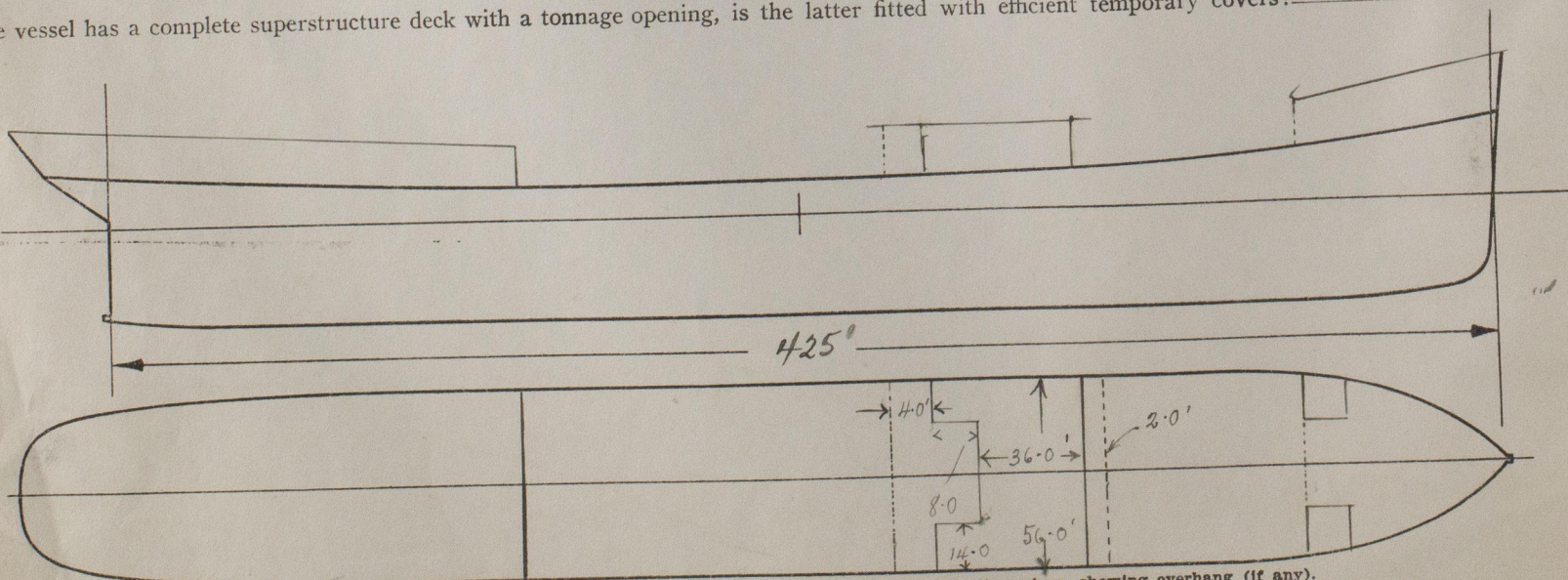
Are Rules 12, 13, 14, 15, 16, 17, 18 complied with as far as practicable? yes  
Are hatchway coamings stiffened in accordance with Rule 9? yes  
Length of bulwarks in wells—forward: 114 feet; aft: 114 feet.  
Area of freeing ports required by regulations (Rules 30 and 100) forward: \_\_\_\_\_ sq. ft.; aft: \_\_\_\_\_ sq. ft.

No. Ft. x Ft.  
Particulars of freeing ports fitted { forward well } \_\_\_\_\_ sq. ft.  
on each side of vessel { after well } Open Bulwarks fitted = \_\_\_\_\_ 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  
Is the gangway strong and efficiently braced fore and aft? yes  
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:

Fee: \$100.00

Expenses (if any) \$3.00

(Signed)

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

Foundation