

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. 121

Port of Survey New York

Date of Survey 15 June 1931

Name of Surveyor H. F. Allen

Ship's Name. S.S. "Reaper"	Port of Registry and Nationality. Wilmington U.S.A.	Official Number. 220864	Gross Tonnage. 6464	Date of Build. 1920-11	Particulars of Classification. +100 A1 Car. Pk in bulk
Number in Register Book 82297					
Owner The Texas Co.		Builder Texas S.S. Co.		Hull No. 24	
Moulded dimensions 415.0 × 56.0 × 32.83 (85% = 27.9)					
Moulded displacement at a moulded draught of 85 per cent. of moulded depth 14,830 Tons					
Coefficient of fineness for use with tables .800					

DEPTH FOR FREEBOARD.		CORRECTION FOR DEPTH.		CAMBER	
Moulded depth	32.83	(a) When D is greater than $\frac{L}{15}$		Standard	$\frac{56 \times 12}{50} = 13.45$
Stringer plate	.05	$(D - \frac{L}{15}) \times R = (32.83 - 27.67) \times 3 = 15.63$	+ 15.63	Ship	14.00
Sheathing in wells		(b) When D is less than $\frac{L}{15}$ (if allowed).		Difference	.55
$T(\frac{L-S}{L}) =$		$(\frac{L}{15} - D) \times R =$		Restricted to	
Depth D =	32.88	If restricted by height of superstructures		Allowance = $\frac{\text{Difference}}{4} \times (1 - \frac{S_1}{L}) = \frac{.55}{4} \times .585 = .08$	

SUPERSTRUCTURES.

	Mean Covered Length S	Effective Length S ₁ (Uncorrected for Height)	Height.	Correction for Height.	Effective Length.
Poop enclosed	107.00	107.00	8.0	✓	107.00
" overhang					
R.Q.D. enclosed					
" overhang					
Bridge enclosed	28.50	28.50	8.0	✓	28.50
" overhang aft	6.00	4.50			4.50
" overhang forward					
F'cle enclosed	33.00	32.30	8.0	✓	32.30
" overhang					
Trunks forward					
" aft					
Tonnage opening					

Sheer fwd

13.7	3	41.1
43.2	3	129.6
98.0	1	98.0
		268.7

Standard Sheer fwd

11.34	3	34.02
45.84	3	137.52
103.00	1	103.00
		274.54

TOTAL = **174.50** **172.30** **172.30**
Length of ship (L) = **415** **415** **415**
% Covered... = **42.05%** **41.57%** **41.57%**
Corresponding %, corrected for absence of forecastle if required } **A = Tanker** **B = 32.5%** **Correction for Bridge less than .2 L if required } Tanker**
Allowance ... = **42** × **.325** = **-13.66**

SHEER.

Station.	Actual Sheer.	Standard Sheer.	Allowed Sheer.	S. M.	Products.
A.P. 1	50.00	51.50	50.00	1	50.00
2	17.00	22.92	17.00	4	68.00
3	1.30	5.67	1.30	2	2.60
4				4	
5	13.70	11.34	13.70	2	27.40
6	43.20	45.84	43.20	4	172.80
F.P. 7	98.00	103.00	98.00	1	98.00

If excess sheer forward and deficient sheer aft:-

Actual sheer aft = ✓
Standard sheer aft = ✓
Actual sheer forward = $\frac{268.7}{274.54} = 97.86\%$
Standard sheer forward = $\frac{274.54}{274.54} = 100\%$
∴ allow 97.86% of open Fx.

Length of enclosed superstructure L

Forward of amidships = ✓
Aft of amidships = ✓

Mean effective sheer... = **18** **418.80**
Standard sheer .05 L + 5 = **23.27**
Difference (Df) = **25.75**
Allowance = $Df \times (\frac{.75 - S}{2L}) = 2.48 (\frac{.75 - .21}{2}) = 1.34$
If limited on account of amidship superstructure = ✓
If limited on account of excess sheer (1½ in. per 100 ft.) = ✓

DRAFTS.		F. W. ALLOWANCE	TABULAR FREEBOARD (corrected for flush deck if required) =	
Moulded Depth D =	32' - 10"	Displacement = 14260	Corrected for Coefficient $\frac{.800 + .68}{1.36} =$	66.15
Stringer Plate =	3 ¼"	Tons per inch = 48.5		71.98
Freeboard	32' - 10 ¾"		Correction for Depth	
Moulded draught	6' - 3 ¼"		" Superstructures	15.63
Addition for keel below base line	26' - 7 ½"	$\frac{14260}{40 \times 48.5} = 7.35$	" Sheer	1.34
Extreme draught	26' - 9 ¾"		" Camber	.08
			" Thickness of deck	
			" Scantlings, etc.	
				16.97 13.74 + 3.23
				Summer Freeboard = 75.21

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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002101-002108-0178

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). no openings
Has the bridge an efficient steel bulkhead at the fore end? yes
Give particulars of the means of closing the openings in this bulkhead. single steel w. 2 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. steel plates secured by hose bolts 12" apart not passing to
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?
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	$3/8"$	$7/16"$ $1/2"$	$3/8"$	
Scantlings of stiffeners	Two longitudinal $9 \times 3 1/2 \times 1/2$ B.A.	$4 \times 3 1/2 \times 7/16$ B.A.	$3 1/2 \times 3 1/2 \times 7/16$	
Spacing of stiffeners, and if bracketed	$30"$ spacing <u>yes</u>	$30"$ T.B.	$30"$ <u>no</u>	
Height of sills of openings above deck	<u>no opening</u>	$22"$	$13"$	

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 Hatch $9'-0" \times 15'-0"$		2nd Hatch $4'-0" \times 4'-3"$		3rd Hatch $7'-0" \times 4'-0"$		4th Hatch $7'-0" \times 7'-0"$		5th Hatch $8'-3" \times 7'-0"$		6th Hatch $7'-6" \times 7'-0"$		Ship.	Rule.
Item.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.	Ship.	Rule.
COAMING														
Height above top of DECK	24		24	30	24	24	24		24					
Thickness														
Sides.....	$7/16$		$7/16$	$7/16$	$7/16$	$7/16$	$7/16$		$7/16$					
Ends.....	$7/16$		$7/16$	$7/16$	$7/16$	$7/16$	$7/16$		$7/16$					
SHIFTING BEAMS OR WEB PLATES.														
Number.....	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark					
Section and Scantlings.....														
Material.....														
* FORE AND AFTERS.														
Number.....	\checkmark		\checkmark	\checkmark	\checkmark	\checkmark	\checkmark		\checkmark					
Section and Scantlings.....														
Material.....														
HATCHES Thickness	$7/16$ Steel		$7/16$ Steel	$7/16$ Steel	$7/16$ Steel	$7/16$ Steel	$7/16$ Steel		$7/16$ Steel					
Remarks.....	Stiffened		Stiffened	Stiffened	Stiffened	Stiffened	Stiffened		Stiffened					

* 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: _____ feet; aft: _____ feet.

Area of freeing ports required by regulations (Rules 30 and 100) forward: _____ sq. ft.; aft: _____ sq. ft.

No. Ft. \times Ft. Area

Particulars of freeing ports fitted { forward } _____ = _____ sq. ft.
on each side of vessel { well } Open
{ after } _____ = _____ sq. ft.
{ well }

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

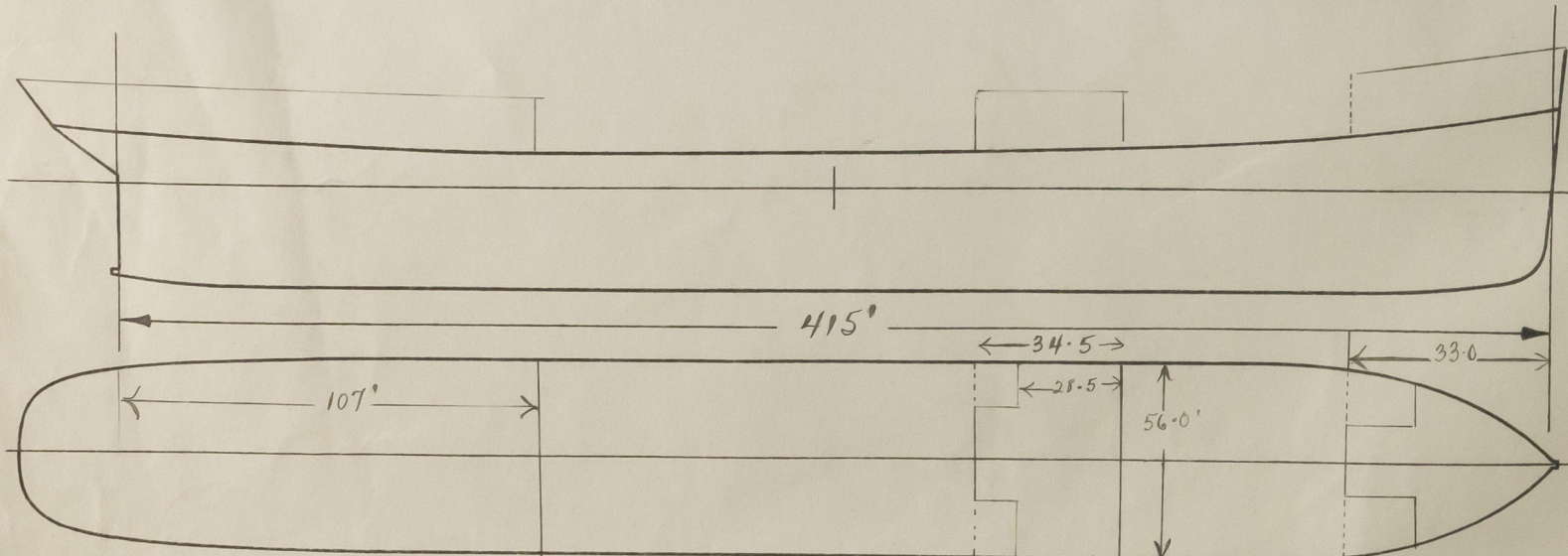
In oil tankers, what is the extent of the fore and aft gangway? Bridge to Poop Are the crew berthed in the forecastle? (Rule 96). no

Is the gangway strong and efficiently braced fore and aft? yes State spacing of supports 10 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: "Harrister" "Occidental" "Illinois" "Argon" etc

Fee: \$90.00 Expenses (if any) yes

(Signed)

Albert T. Allen
Surveyor to Lloyd's Register of Shipping.