

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index. No. **30377**
(For London Office only.)

22 APR 1933

No. 6929

Computation of Freeboard for ~~Steamer, Sailing Ship, Tanker~~ **MOTOR VESSEL**
having complete shelter deck with tonnage opening
CAPITAINE POTIE
BELGIAN FREIGHTER (Type of Superstructures.)
Ship's Name **MISSOURIAN** Nationality and Port of Registry **AMERICAN BELGIAN NEW YORK** Official Number **222236** Gross Tonnage **5921** Date of Build **1922-6**
Moulded Dimensions: Length **445.0** Breadth **59.66** Depth **31.0** TO UPPER DK
Moulded displacement at moulded draught = 85 per cent. of moulded depth **15080** tons
Coefficient of fineness for use with Tables **.755** **.755**
Port of Survey **San Francisco**
Date of Survey **7th April 1933**
Name of Surveyor **David Millard**
Particulars of Classification **10091 Shelter deck with freeboard**
S.S. No. 2-30 ✓

Depth for Freeboard (D)		Depth correction		Round of Beam correction	
Moulded depth	31.0	(a) Where D is greater than Table depth (D - Table depth) R =		Moulded Breadth (B)	59.66
Stringer plate	60	(31.04 - 29.67) 3.00 = + 4.11" ✓		Standard Round of Beam = $\frac{B \times 12}{50}$	14.32"
Sheathing on exposed deck		(b) Where D is less than Table depth (if allowed) (Table depth - D) R =		Ship's Round of Beam	14.625 NIL.
$T \left(\frac{L-S}{L} \right) =$				Difference	307
Depth for Freeboard (D) =	31.054	If restricted by superstructures	✓	Restricted to	
				Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right)$	$\frac{14.32}{4} \times 0.184 = +.07$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	18.91	18.91	8.0	-	18.91
" overhang ...	23.33	11.66			11.66
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	398.09	398.09	8.0	-	398.09
" overhang aft ...					
" overhang forward ...					
F'cle enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4.667	8.17	8.0	-	8.17
" forward ...					
Total ...	445.00	436.83			436.83

Standard Height of Superstructure	7.5
" " R.Q.D.	
Deduction for complete superstructure	42"
Percentage covered $\frac{S}{L} =$	100%
" " $\frac{S_1}{L} =$	98.16%
" " $\frac{E}{L} =$	98.16% ✓
Percentage from Table, Line A. (corrected for absence of forecastle (if required))	97.73%
Percentage from Table, Line B. (corrected for absence of forecastle (if required))	
Interpolation for bridge less than 2L (if required)	
Deduction = 42 × .9773 =	- 41.05" ✓

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	54.50	1		54.50	52.25	52.25	1		52.25
$\frac{1}{2}L$ from A.P. ...	24.25	4		97.00	13.00	14.75	4		76.00
$\frac{3}{4}L$ " ...	6.80	2		12.00	5.58	2.50	2		6.50
Amidships ...	-	4		-	-	-	4		-
$\frac{3}{4}L$ from F.P. ...	12.00	2		24.00	5.65	7.50	2		19.50
$\frac{1}{2}L$ " ...	148.50	4		194.00	29.12	31.50	4		147.00
F.P. ...	109.00	1		109.00	109.00	109.00	1		115.00
Total ...				490.50					422.25

$$\text{Correction} = \frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{68.25}{18} \times .25 = +.95"$$

If limited on account of midship superstructure.

actual T.O. Ht. = 96"
Standard T.O. Ht. = 90"
Mean actual sheer aft = Deficient.
Mean standard sheer aft = Excess = 6"

Mean actual sheer forward = Deficient.
Mean standard sheer forward = Deficient.

Length of enclosed superstructure forward of amidships =
" " aft of " = } 115.50

Deduction for Tropical Freeboard.
Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.04
Summer freeboard = 4.52
Moulded draught (d) = 26.52

Deduction for Tropical freeboard and addition for Winter freeboard = $\frac{d}{4}$ inches = 6 $\frac{3}{4}$ " ✓

Addition for Winter North Atlantic Freeboard (if required) =

Deduction for Fresh Water.

Displacement in salt water at summer load water line
 $\Delta = 15276$
Tons per inch immersion at summer load water line
T = 53.5

Deduction = $\frac{\Delta}{40T}$ inches
= 7 $\frac{1}{4}$ " ✓

TABULAR FREEBOARD corrected for Flush Deck (if required)
Correction for coefficient

	+	-
Depth Correction	4.11	-
Deduction for superstructures	-	41.05
Sheer correction	.95	-
Round of Beam correction	.07	-
Correction for Thickness of Deck amidships	-	-
Other corrections, scantlings, etc.	-	-
	5.13	41.05

Summer Freeboard = 54.35

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc	14"	Tropical Fresh Water Freeboard	3'-4 $\frac{1}{2}$ "
Fresh Water Line	7 $\frac{1}{4}$ "	Fresh Water	3'-11"
Tropical Line	6 $\frac{3}{4}$ "	Tropical	3'-11 $\frac{1}{2}$ "
Winter Line below	6 $\frac{3}{4}$ "	Winter	5'-1"
Winter North Atlantic Line	✓	Winter North Atlantic	✓

MARKING FORM

RECEIVED 30 SEP 1933

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	N°1 CARGO HATCH	N°2 CARGO HATCH	N°3 CARGO HATCH	N°4 CARGO HATCH	N°5 CARGO HATCH	N°6 CARGO HATCH	N°7 CARGO HATCH	TONNAGE OPENING	
Dimensions of Hatchway	18'0" x 29'3"	18'0" x 35'0"	18'0" x 21'0"	18'0" x 9'4"	18'0" x 11'8"	18'0" x 28'0"	18'0" x 22'5"	18'0" x 4'8"	
COAMINGS	Height above Deck	30 1/2"	30 1/2"	30 1/2"	30 1/2"	30 1/2"	30 1/2"	11"	
	Thickness	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	
	Sides	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	
	Ends	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	5/16"	
	Stiffeners	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	7/32" x 3 1/2" x 4 1/2"	
HATCH BEAMS	Brackets	5 P.S.	6 P.S.	3 P.S.	1 P.S.	1 P.S.	5 P.S.	4 P.S.	
	Number	5	6	3	1	1	5	4	
	Spacing	4' 11 1/8"	5' 0 1/2"	5' 4"	4' 10 1/4"	6' 0 1/4"	4' 8 5/8"	4' 8 5/8"	
	Scantling and Sketch	3/75"	3/75"	3/75"	3/75"	3/75"	3/75"	3/75"	
	Bearing Surface	4"	4"	4"	4"	4"	4"	4"	
FORE AND AFTERS	Number	Hatchways on upper deck							
	Spacing	These hatchways are constructed with 10' 3 1/2" x 5 1/2" coamings							
	Unsupported Lengths	N°1 18'0" x 29'3" N°2 18'0" x 35'0" N°3 18'0" x 21'0" N°4 18'0" x 9'4"							
	Scantling and Sketch	N°5 18'0" x 11'8" N°6 18'0" x 28'0" N°7 18'0" x 22'5"							
	Bearing Surface	Hatch No 1 and 2 fitted with 3" wood covers. La baulins, cleats, battens, and a rope rule							
HATCH COVERS	Material	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	WOOD	
	Thickness	3"	3 1/4"	3"	3"	3 1/4"	3 1/4"	2 1/4"	
	How fitted	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	F.A.	
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	
	Spacing of Cleats	24"	24"	24"	24"	24"	24"	24"	
Number of Tarpaulins	Number of Tarpaulins	3	3	3	3	3	3	2	

*Are wood fore and afters steel shod at all bearing surfaces? *Yes*
 Are battens and wedges efficient and in good condition? *Yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *Yes*
 Are lashings provided in accordance with rule requirements? *Yes*

Particulars of fiddle, funnel and ventilator coamings: *FIDDLE: No openings or gratings fitted. Exhaust funnel efficiently constructed & supported. ENGINE ROOM SKYLIGHT: Steel plates & angles 15'0" x 11'0" x 1/4" steel flaps with 2-10 bolts under each flap. VENTILATORS: 10 engine room 24" dia. coamings 9'6" high 3/75" stiffened by angles. The casing protected by strong steel side lower for full length.*

Wood plugs & canvas cover for closing ventilators

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— *Ventilators: 10 on shell deck for the N°1-2-3-4-5 cargo holds 18'24" dia. 36" high 3/75 coamings. 30 on side etc one 9' dia 36" high 3/32 coaming.*

Wood plugs & canvas cover for closing ventilators

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— *Air pipes for the fore & aft peak tanks & double bottom tanks of 8" dia steel pipe 36" above shell deck. Air pipes for deep tanks 6" dia steel pipe 36" above shell deck & have N°1 screws down tops*

Wood plugs for closing air pipes

Particulars of Gangway Cargo and Coaling Ports:—

None

Empire Swan.

Particulars of Scuppers and Sanitary Discharge Pipes:— *Scuppers each side 4' x 3 1/4" through shell deck gunwale bar & sheer stake. Scuppers for draining upper deck pass through space Pl. 5 each side 3 1/2" dia cast steel with non return valves & screw down plug for each scupper. All sanitary discharge pipes from accommodation & crews quarters pass through ship's side above the freeboard deck & have non return valves fitted.*

Particulars of Side Scuttles:— *Free ing ports for tonnage opening 25' x 13' lower edge of opening 13'2" above steel deck. Two 10" air ports through shell deck sheer stake to emergency gun. at 10' from. Two 9" air ports to carpenter's shop. aft have hinged deadlight covers*

Particulars of Guard Rails:— *Three ball stanchions 4'3" above deck spaced about 60" apart stanchions taper from 1 1/2" to 1 3/8" diam. Top rail 1 1/8" dia. lower rails 1" dia. portable in case of hatches where it is a gale chain fitted. Stanchions where stationary stayed to deck with 1 3/8" stay every 2' stanchions*

Particulars of Gangways, Lifelines, etc.:—

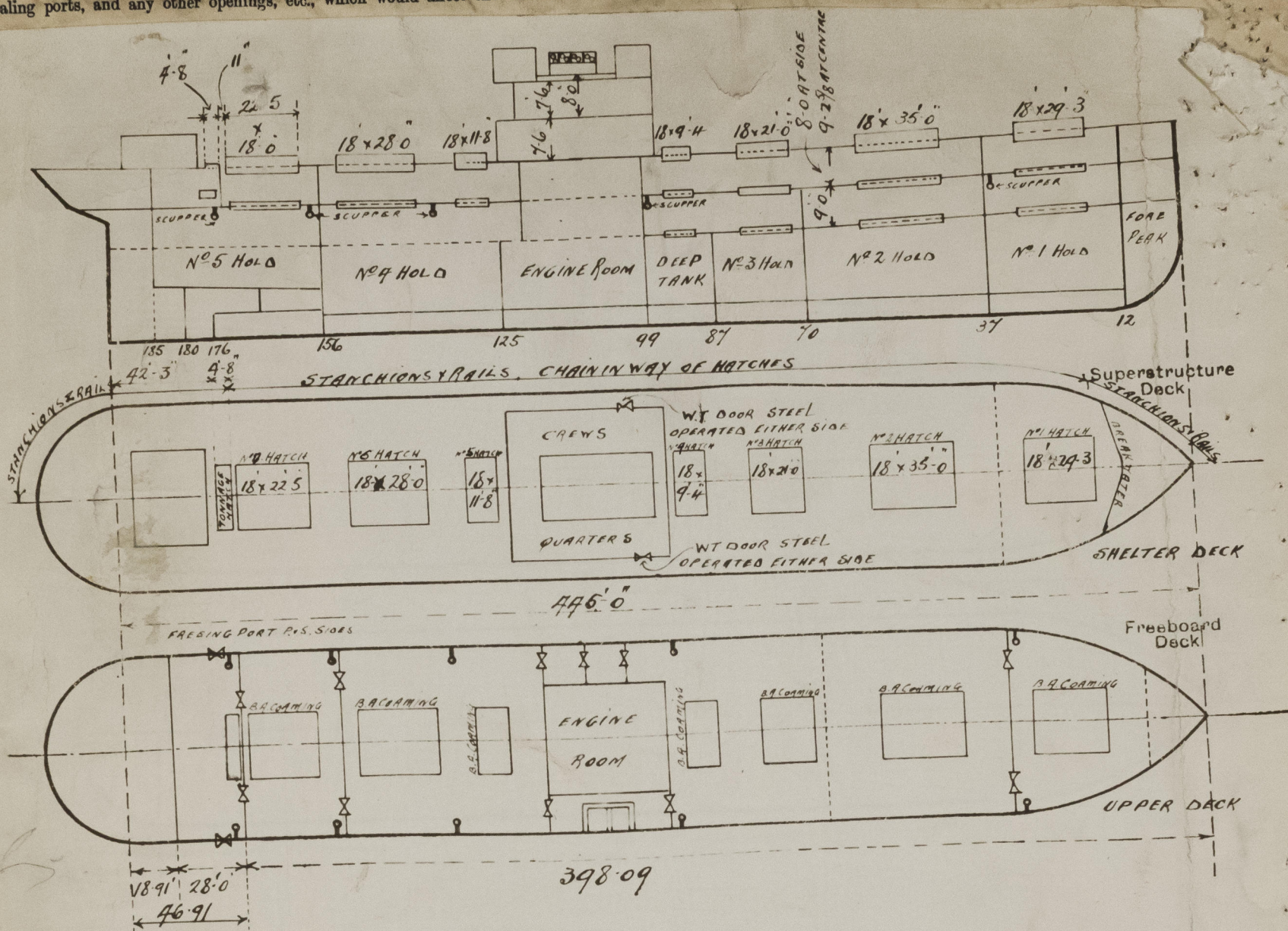
No permanent attachments for life lines from the midship house forward or aft.

Particulars of Freeing Arrangements.						
	Length of Bulwark	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well			✓			
Forward Well			✓			
State position of each freeing port ... After Well:— (F. 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
Poop Bulkhead	3/75	3/75	3 1/2" x 3 3/8"	30"	✓	✓	✓	8'0" side
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Bridge, After Bulkhead	3/75	3/75	4" x 3 1/8"	30"	✓	4'0" x 3'0 1/2"	23'	8'0" side
Bridge, Forward Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Forecastle Bulkhead	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	3/75	3/32	3 1/2" x 3 3/8"	28"	✓	ORDINARY STEEL DOORS	15'	7'6"
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	<i>No openings</i>
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	<i>Wood shifting boards 10' x 2 3/4" in channel stiffeners</i>
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	<i>ordinary steel doors into engine room with bolt locks</i>
Deckhouses on Flush Deck Ships	✓

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: *Vessel built on the longitudinal system, examined afloat at this time for freeboard.*
particulars due to alterations to obtain reduction in Panama Canal dues by the fitting of tonnage opening off, also bulkhead at
foreboard scuppers on upper deck as shown above. All trunnion hatches, the small openings closed by milled plate, bridge scuppers openings closed.
Present load draft = 28'6". Tons per inch = 53.90. Displacement 16,430 tons S.W.
light draft = 9'11". Tons per inch = 49.00. Displacement 5030 tons S.W.

Builder's name and yard number *Merchants Shipbuilding Corp. Chester Pa. Yard No 386*
 Names of sister ships *M/V CALIFORNIAN S. F. REPORT No 6898.*
 Owners *American Hawaiian S.S. Co.*

Fee £ *\$100.⁰⁰*
2⁵⁰ Exp

Received by me



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