

Cloud's Register of Shipping SURVEYS FOR FREEBOARD.

Index No. **3450**
(For London Office only)Port of Survey **Seattle Wash.**

having

Computation of Freeboard for Steamer, Sailing Ship, Tanker
Shelter Deck with Tonnage Opening**MARIA C.**

(Type of Superstructures.)

Date of Survey **MAY 15 - JUNE 20, 1934**Ship's Name
"WILLIAM LUCKENBACH"Nationality and Port of Registry
U.S.A. NEW YORKOfficial Number
215709Gross Tonnage
NOT YET ASSIGNEDDate of Build
1913.Name of Surveyor **W. Smith****"RAPPAHANNOCK" ex "POMMERN"**Moulded Dimensions: Length **472.02**Breadth **59.0**Depth **26.31**To UPPER DECK **39.0**

Moulded displacement at moulded draught = 85 per cent. of moulded depth

Coefficient of fineness for use with Tables

.747Particulars of Classification **100 A.I****WITH FREEBOARD. CONTEMPLATED**

Depth for Freeboard (D)

Moulded depth **31.67**Stringer plate **7.4**

Sheathing on exposed deck

 $T \left(\frac{L-S}{L} \right) =$ Depth for Freeboard (D) = **31.7**

Depth correction

(a) Where D is greater than Table depth

$(D - \text{Table depth}) R = (31.7 - 31.47) 3 = 0.69$

(b) Where D is less than Table depth (if allowed)

$(\text{Table depth} - D) R =$

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) **59**

Standard Round of Beam = $\frac{B \times 12}{50} = 14.17$

Ship's Round of Beam = **14.17**

Difference

Restricted to

Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) =$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	21.87	21.87	7.6	✓	21.87
„ overhang ...	12.90	6.45	7.6	✓	6.45
R.Q.D. enclosed ...					
„ overhang ...					
Bridge enclosed ...					
„ overhang aft ...					
„ overhang forward ...					
F'cle enclosed ...	433.15	433.15	7.6	✓	433.15
„ overhang ...					
Trunk aft ...					
„ forward ...					
Tonnage opening aft ...	4.08	5.26	4.4		5.26
„ forward ...					
Total ...	472.00	466.73			466.73

Standard Height of Superstructure **7.5**R.Q.D. **✓**Deduction for complete superstructure **42**Percentage covered $\frac{S}{L} = 100$ $\frac{S_1}{L} = 98.88$ $\frac{E}{L} = 98.88$

Percentage from Table, Line A.

(corrected for absence of forecastle (if required)) **98.62**

Percentage from Table, Line B.

(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = **42 + 98.62 = 41.42**

SHEER CORRECTION.

Station	Standard Ordinate	S M	Product	Actual Ordinate	Effective Ordinate	S M	Product
A.P. ...	57.2	1	57.20	4'-6 1/2	54.5	1	54.5
1/8 L from A.P. ...	25.45	4	101.80	1'-9"	21.0	4	84.0
2/8 L " ...	6.29	2	12.58	2 1/2	22.5	2	50
Amidships ...		4				4	
3/8 L from F.P. ...	12.58	2	25.16	1'-5 1/2	17.5	2	35.0
1/8 L " ...	50.90	4	203.60	4'-3"	51	4	204
F.P. ...	11.44	1	11.44	1'-3 1/2	135.5	1	135.5
Total ...	51.48		514.74				518.0

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

$\frac{3.26}{18} \times \frac{.75}{2L} = -.05$

If limited on account of midship superstructure.

If limited to maximum allowance of 1 1/2 ins. per 100 ft.

Mean actual sheer aft = **Defic 7.75**Mean actual sheer forward = **Excess**Length of enclosed superstructure forward of amidships = **0.88**aft of " = **0.88**

Sheer Standard

57.2

76.35

18.87

152.42

54.5

63

7.5

125.0

125

152.42

82%

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **31.7**Summer freeboard = **5.39**Moulded draught (d) = **26.31**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **6.58**

Addition for Winter North Atlantic Freeboard (if required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 15710$

Tons per inch immersion at summer load water line

 $T = 52.2$ Deduction = $\frac{\Delta}{40 T}$ inches $= \frac{15710}{40 \times 52.2} = 7 1/2$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient **747 + 68 = 1427** $\frac{1427}{136} = 10.5$ Depth Correction ... **0.69**Deduction for superstructures ... **41.42**Sheer correction ... **.05**Round of Beam correction ... **-**Correction for Thickness of Deck amidships ... **-**Other corrections, scantlings, etc. ... **6.99****7.68 41.47 - 3379**Summer Freeboard = **64.76**

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

Tropical Fresh Water Line above Centre of Disc	13	14
Fresh Water Line	6 1/2	7 1/2
Tropical Line	6 1/2	7 1/2
Winter Line below	6 1/2	7 1/2
Winter North Atlantic Line	6 1/2	7 1/2

Tropical Fresh Water Freeboard	5-4 3/4	5-4 3/4
Fresh Water	4-3 3/4	4-2 3/4
Tropical	4-10 1/4	4-9 1/4
Winter	4-10 1/4	4-10 1/4
Winter North Atlantic	5-11 1/4	5-11 1/4

RECEIVED 1 - OCT 1934

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	Nº 1.	Nº 2	BOAT DECK Nº 3	Nº 4	Nº 5	Nº 6	Ton. OPNG.		
Dimensions of Hatchway	33'-6" x 19'-7"	36'-2" x 19'-7"	23'-10" x 16'-4"	21'-8" x 19'-7"	21'-8" x 19'-7"	24'-8" x 19'-7"	4'-1" x 19'-7"		
COAMINGS	Height above Deck	35"	35"	16"	35"	35"	10"		
	Thickness	5/8"	5/8"	7/16"	5/8"	7/16"	10 x 3 1/2 x 1/2		
	Sides	1/2"	1/2"	1/2"	1/2"	1/2"	CHANNEL.		
	Stiffeners	12 x 4 x 1/2"	12 x 4 x 1/2"	12 x 4 x 1/2"	12 x 4 x 1/2"	12 x 4 x 1/2"			
	Brackets, Stays	BOLT PLTS	BOLT PLTS	BOLT STYS	BOLT STYS	BOLT STYS			
HATCH BEAMS	Number	5'-6"	5'-0"	4'-5" 5'-5"	5'-6"	5'-6"	5'-0"		
	Spacing	20'-23" x 3/8"	20'-23" x 3/8"	20'-23" x 3/8"	20'-23" x 3/8"	20'-23" x 3/8"	20'-23" x 3/8"		
	Scantling and Sketch	4 x 4 x 3/8"	4 x 4 x 3/8"	4 x 4 x 3/8"	4 x 4 x 3/8"	4 x 4 x 3/8"	4 x 4 x 3/8"		
	Bearing Surface	5 x 3 1/2 x 3/8"	5 x 3 1/2 x 3/8"	5 x 3 1/2 x 3/8"	5 x 3 1/2 x 3/8"	5 x 3 1/2 x 3/8"	5 x 3 1/2 x 3/8"		
{ NONE } FORE AND AFTERS	Number	NOTE: Hatchways on foreboard deck are usually similar to those on the superstructure deck except that coamings are 1" high and Nº 3 hatchway is 14'-5" in length and 16'-4" in breadth with 2 Hatch Beams (Scantlings as noted) and spaced 4'-9" 5'-0"							
	Spacing								
	Unsupported Lengths								
	Scantling and Sketch								
	Bearing Surface								
HATCH COVERS	Material	WOOD	WOOD	WOOD	WOOD	WOOD	STEEL		
	Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	1/2"		
	How fitted	F & H	F & H	F & H	F & H	F & H	HOOK BOLTS		
	Bearing Surface	4"	4"	4"	4"	4"	3 1/2"		
Spacing of Cleats	24"	24"	24"	24"	24"	24"			
Number of Tarpaulins	3	3	3	3	3	3			

Particulars of fiddle, funnel and ventilator coamings:— Fiddle, funnel & E.V. ventilator coamings are fitted on top of houses on Boat Deck, approx. 17' at above superstructure deck. They are strong, well constructed and supported; all openings can be closed by hinged steel plates permanently attached.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

On superstructure deck on companionway just forward of the Nº 1. hatchway and one aft at poop; same are of heavy steel construction and capable of standing alone and are closed with heavy steel doors permanently attached. Height of Sills 18".

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—

bulbators and their coamings on superstructure deck are substantially constructed; height of coamings 36" and supplied with ro-ro plugs and access covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—

Three feet in height, extra strong and capable of standing alone, covered with zinc gauge.

Particulars of Gangway Cargo and Coaling Ports:—

None.

Particulars of Scuppers and Sanitary Discharge Pipes:— Starboard deck fitted with 6 cast steel scuppers on each side direct overboard with closing appliances on this deck also scuppers leading down into bilges.

Particulars of Side Scuttles:—

None

Particulars of Guard Rails:—

Fitted fore and aft 47" high 3 tiers of rails

Particulars of Gangways, Lifelines, etc.:—

Staggered when required

Particulars of Freeing Arrangements.

	Length of Bulwark WELL	Height of Bulwark	Size of Freeing Ports	Number each side	Area each side	Rule area each side
After Well TONNAGE	See sketch	—	2'-0" x 1'-3"	ONE	2.5 sq	
Forward Well						

State position of each freeing port (F. and A. position and height above deck edge) Tonnage Well:— Just above gunwale bar
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.

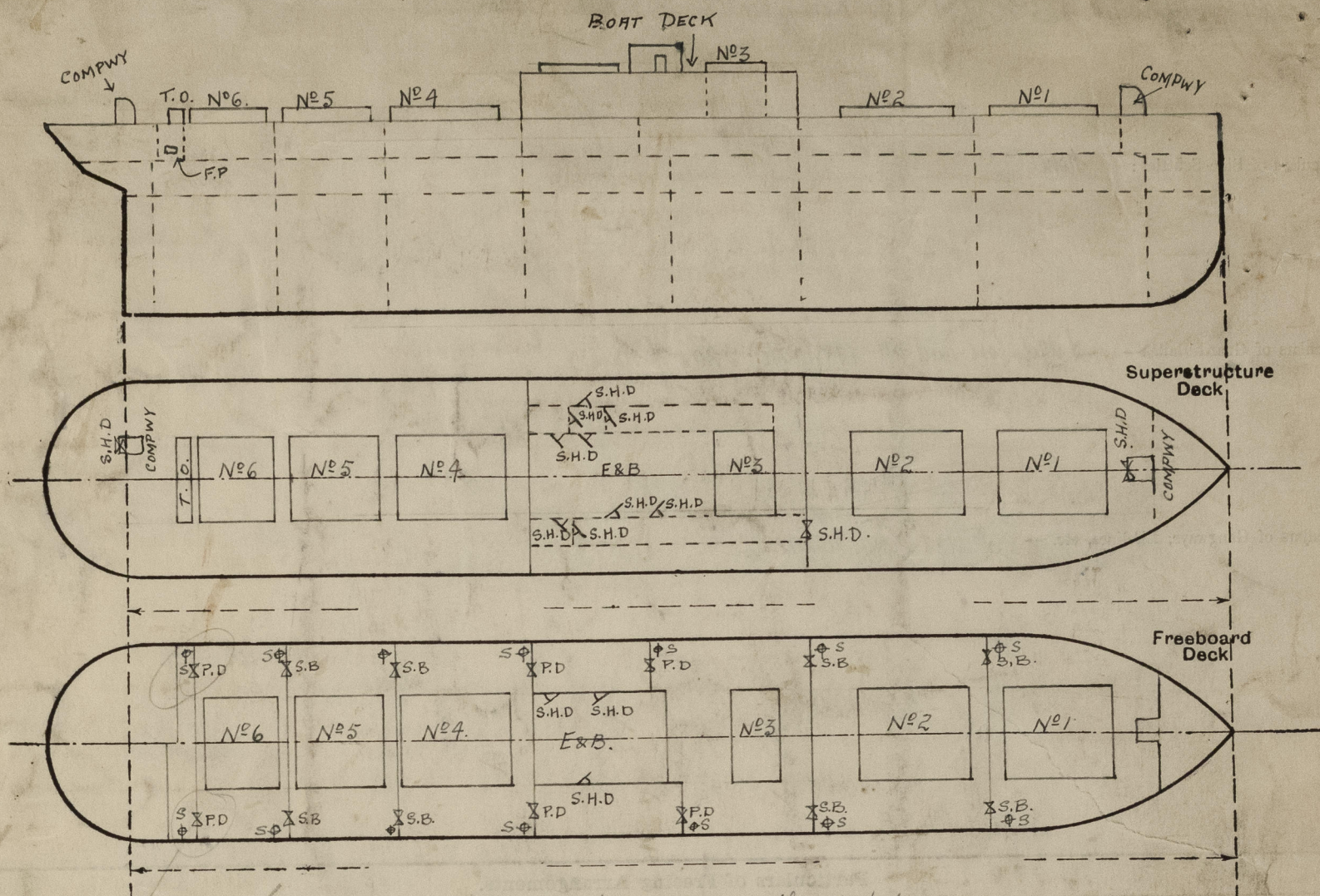
Particulars of Superstructures, Trunks, Casings, Deckhouses.

	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	5/16"		3 x 2 1/2 x 1/4"	24"-30"				
Raised Quarter Deck Bulkhead	10 x 5/16"	1/4"	3 x 3 x 7/16"	24"-30"				
Bridge, After Bulkhead	10" x 1/2"	1/4"	4.3 x 2 1/2 x 1/4"	24"-30"	—	5'-6" x 2'-2"	18"	89.34"
Bridge, Forward Bulkhead	10" x 1/2"	5/16"	6 x 2 1/2 x 3/8"	27"-30"	CLIPS AT BOTTOM	5'-6" x 2'-2"	18"	89.34"
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	10" x 1/2"	5/16"	4.3 x 2 1/2 x 1/4"	30"	—	5'-6" x 2'-2"	15"	90.5"
Exposed Machinery Casings on Superstructure Decks		1/4"	4.3 x 2 1/2 x 1/4"	26"	—	5'-2" x 1'-10"	9"	78"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances SUPERSTR. DECK	10" x 1/2"	1/4"	4.3 x 2 1/2 x 1/4"	29"	—	5'-0" x 2'-6"	18"	89.34"
Deckhouses on Flush Deck Ships								

Particulars of Closing Appliances (state if capable of being manipulated from both sides).

Poop Bulkhead				
Raised Quarter Deck Bulkhead				
Bridge, After Bulkhead	heavy steel door permanently attached	7	as Shells OK	
Bridge, Forward Bulkhead	" " " and frame permanently attached	9		
Forecastle Bulkhead				
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	Steel doors permanently attached			
Exposed Machinery Casings on Superstructure Decks				
Machinery Casings within Superstructures not fitted with Class I Closing Appliances SUPERSTR. DECK				
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 shewn on the following sketches:—



S.H.D. Steel hinged doors permanently attached
S.B. Storm Boards in angles full height
P.D. Portable wood doors secured by hook bolts.

State any special features in the construction of the ship:—

best surveyed afloat at Seattle Wash.

Displacement at 26'- 9 1/2" 15930 tons

SEE TABLE ATTACHED

FOR POSITION OF TONNAGE OPENING, PLEASE SEE SKETCH ATTACHED

Builder's name and yard number *Bruner Vulkan, begisack.*

Names of sister ships

Owners *Luckenbach Steamship Co. Inc.*

Fee \$90.00 Exp. 2.50-2.75
SOS. N.Y.
25 Seattle

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