

Lloyd's Register of SURVEYS FOR FREEBOARD.

PR 4

Index No. **25501**
(For London Office only.)

Computation of Freeboard for Steamer, Sailing Ship, Tanker

Port of Survey Seattle, Wash.Date of Survey March 20th-30th 1934Name of Surveyor W. SmithParticulars of Classification 100. F.I.Shelter Deck with freeboard

(Type of Superstructures.)

Ship's Name

Nationality and Port of Registry

Official Number

Gross Tonnage

Date of Build

LUCKENBACHNEW YORK21580078821918-2Moulded Dimensions: Length 440.447 Breadth 55.91 Depth 31'-2"Moulded displacement at moulded draught = 85 per cent. of moulded depth 14500 tons 14240 tonsCoefficient of fineness for use with Tables .753

Depth for Freeboard (D)

Moulded depth ... 31.17
 Stringer plate04
 Sheathing on exposed deck
 $\frac{(L-S)}{L} =$

Depth for Freeboard (D) = 31.21

Depth correction

- (a) Where D is greater than Table depth
 (D - Table depth) R =
 $(31.21 - 29.80) \times 3 = +4.23$
- (b) Where D is less than Table depth (if allowed)
 (Table depth - D) R =

If restricted by superstructures

Round of Beam correction

Moulded Breadth (B) 55.91
 Standard Round of Beam = $\frac{B \times 12}{50} = 13.42$
 Ship's Round of Beam SHelter = 14 "12.00"
 Difference 1.42
 Restricted to ☒
 Correction = $\frac{\text{Diff}^\circ}{4} \times \left(1 - \frac{S_1}{L}\right) = \frac{1.42}{4} \times 0.162 = +0.01$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	12.0	12.0	9'-6"	✓	12.0
" overhang ...	21.0	10.5	9'-6"	✓	10.5
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...	409.0		9'-6"		
" overhang aft ...	410.0	410.0			410.0
" overhang forward ...					
Fore enclosed ...					
" overhang ...					
Trunk aft ...					
" forward ...					
Tonnage opening aft ...	4.0	7.25			7.25
" " forward ...	447.0				
Total ...	446	439.75			439.75

Standard Height of Superstructure 7.5" " R.Q.D. ☒Deduction for complete superstructure 42Percentage covered $\frac{S}{L} = 100.00$ " " $\frac{S_1}{L} = 98.38$ " " $\frac{E}{L} = 98.38$ Percentage from Table, Line A. 98.017
(corrected for absence of forecastle (if required))Percentage from Table, Line B. ☒
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction = 42 \times 98.01 = -41.16

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	54.70	1		54.70	26" $+24 = 52$	52	1		52.00
1/2 L from A.P. ...	24.34	4		97.36	5 1/2" $20 = 23.14$	23.14	4		92.56
1/2 L " ...	6.02	2		12.04	1 1/2" $-55 = 5.72$	5.72	2		11.44
Amidships ...	-	4		-	-	-	4		-
1/2 L from F.P. ...	12.03	2		24.06	13 1/2" $20.0 = 14.96$	14.96	2		29.92
1/2 L " ...	48.68	4		194.72	54.5" $57.0 = 60.51$	60.51	4		242.04
F.P. ...	109.40	1		109.40	112" $112.0 = 136.0$	136.0	1		136.00
Total ...				492.28		424			563.96

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75-S}{2L} \right) = \frac{71.68}{18} \left(\frac{75-50}{2} \right) = -1.00$

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 31.21
 Summer freeboard = 4.40
 Moulded draught (d) = 26.81

Mean for Tropical freeboard and addition for
 winter freeboard = $\frac{d}{4}$ inches = $\frac{6.70}{4} = 1.675$

Mean for Winter North Atlantic Freeboard (if
 required =

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 14500$

Tons per inch immersion at summer load water line

 $T = \frac{50 \text{ tons} \times 27.6}{49.50} = 27.6$ Deduction = $\frac{\Delta}{40T}$ inches = $\frac{14500}{40 \times 27.6} = 7.32 = 7 \frac{1}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.753 + .68}{1.36} = \frac{1.433}{1.36}$

Depth Correction ... 4.23 -
 Deduction for superstructures ... - 41.16
 Sheer correction ... - 1.00
 Round of Beam correction01 -
 Correction for Thickness of Deck amidships ... - -
 Other corrections, scantlings, etc. ... - -

4.24 42.16 -37.92
 Summer Freeboard = 52.87

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

Tropical Fresh Water Line above Centre of Disc ... 14"
 Fresh Water Line " " ... 7 1/4"
 Tropical Line " " ... 6 3/4"
 Winter Line below " " ... 6 3/4"
 Winter North Atlantic Line " " ... ✓

Tropical Fresh Water Freeboard ...

Fresh Water " ...

Tropical " ...

Winter " ...

Winter North Atlantic " ...

3'-2 3/4"

3'-9 1/2"

3'-10"

4'-1 1/2"

4'-1 1/2"

RECEIVED 30 MAY 1934
 Lloyd's Register
 MARKING FORM

PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS											
Description of Hatchway		N ^o 1.	N ^o 2.	N ^o 3.	N ^o 4.	N ^o 5.	N ^o 6.	N ^o 7.	N ^o 8.	Tonnage Opening	
Dimensions of Hatchway		22'-6" x 24'-0"	28'-6" x 24'-0"	36'-0" x 24'-0"	24'-0" x 24'-0"	24'-0" x 24'-0"	30'-0" x 24'-0"	27'-0" x 24'-0"	15'-0" x 24'-0"	4'-1" x 24'-0"	
COAMINGS	Height above Deck	30"	30"	30"	30"	30"	30"	30"	30"	4'-1" x 24'-0"	
	Thickness	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	10 1/2"	
	Sides	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	0 x 3 1/2 x 3/4	
	Ends	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"		
	Stiffeners	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	15 x 3 1/4 x 7/16	NONE	
Brackets, Stays		Beltd Plates	Beltd Plates	Beltd Plates	Beltd Plates	Beltd Plates	Beltd Plates	Beltd Plates	Beltd Plates		
HATCH BEAMS	Number	4	5	7	4	4	5	5	3		
	Spacing	4'-6"	4'-9"	4'-6"	4'-9"	4'-9"	5'-0"	4'-6"	4'-1"		
	Scantling and Sketch	27-30 x 44	27-30 x 44	27-30 x 44	27-30 x 44	27-30 x 44	27-30 x 44	27-30 x 44	27-30 x 44		
	ANGLE	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44	4 x 3 x 44		
	Bearing Surface	3"	3"	3"	3"	3"	3"	3"	3"		
NONE FORE AND AFTERS	Number										
	Spacing										
	Unsupported Lengths										
	Scantling* and Sketch										
	Bearing Surface										
HATCH COVERS	Material	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Wood	Steel	
	Thickness	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	2 3/4"	1/2" 3 x 3 x 3/8 STEEL	
	How fitted	F & A	F & A	F & A	F & A	F & A	F & A	F & A	F & A	Spaced 19 1/2"	
	Bearing Surface	3"-4"	3"-4"	3"-4"	3"-4"	3"-4"	3"-4"	3"-4"	3"-4"	HOOK BOLTS	
										3 1/2	
Spacing of Cleats		24"	24"	24"	24"	24"	24"	24"	24"		
Number of Tarpaulins		3"	3"	3"	3"	3"	3"	3"	3"		
*Are wood fore and afters steel shod at all bearing surfaces? <input checked="" type="checkbox"/> Are battens and wedges efficient and in good condition? <input checked="" type="checkbox"/> Are tarpaulins in good condition and in accordance with rule requirements? <input checked="" type="checkbox"/> Are lashings provided in accordance with rule requirements? <input checked="" type="checkbox"/>											

Particulars of fiddley, funnel and ventilator coamings:— Fiddley, funnel & E.R. ventilator coamings are fitted on top of house on top of superstructure, approx 20 feet above superstructure deck. They are strong and well constructed and supported. All openings can be closed by hinged plates permanently attached.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— Ventilators and their coamings on superstructure deck are substantially constructed and supported. Height of coamings 10 feet and supplied with wooden plugs and canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— These to eight feet high specially strong and capable of standing alone, covered with wire gauge.

Particulars of Gangway Cargo and Coaling Ports:—

None



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K.I. Duckenbach

Particulars of Scuppers and Sanitary Discharge Pipes

~~Scupper deck fitted with~~ ~~into hold on each side~~ ~~Space fitted with strong salois~~ ~~bilge other than those within the limit of the machinery space.~~
to closing appliances and leading over each side of forewaged deck scuppers led to the

Particulars of Side Scuttles:

None

Particulars of Guard Rails:—

Fitted fore and aft 41" high, 3 tiers of Nails

Particulars of Gangways, Lifelines, etc.:

Trigged when required

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 Tonnage ...			2'-0" x 1'-3"	ONE	2.5	
Forward Well ...						
State position of each freeing port (R. and A. position and height above deck edge) { Tonnage After Well:— Just above gunnol 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 ...								
Raised Quarter Deck Bulkhead ...								
Bridge, After Bulkhead ...	18" x 3/8"	1/4"	3 x 2 1/2 x 3/8	30"		27" x 60"	18"	7'-6"
Bridge, Forward Bulkhead ...	18" x 7/16"	5/16"	6 x 3 1/2 x 3/8	30"	Double clips top & bottom	—	—	7'-6"
Forecastle Bulkhead ...								
Trunk, Aft ...								
Trunk, Forward ...								
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	18" x 7/16"	3/8"	6 x 3 1/2 x 7/16	36"	Brackets top & bottom	24" x 66"	18"	9'-6"
Exposed Machinery Casings on Super-structure Decks ...	18" x 3/8"	1/4"	3 x 2 1/2 x 3/8	24" - 30"	Attached to beam at top	28" x 60"	18"	7'-6"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances SUPER. DK. ...	18" x 3/8"	1/4"	3 x 2 1/2 x 3/8	36"		24" x 60"	18"	7'-6"
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 ...	Steel hinged doors permanently attached
Bridge, Forward Bulkhead ...	None
Forecastle Bulkhead ...	
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	Steel hinged doors permanently attached
Exposed Machinery Casings on Super-structure Decks ...	" " " " "
Machinery Casings within Superstructures not fitted with Class I Closing Appliances SUPER. DK. ...	" " " " "
Deckhouses on Flush Deck Ships ...	

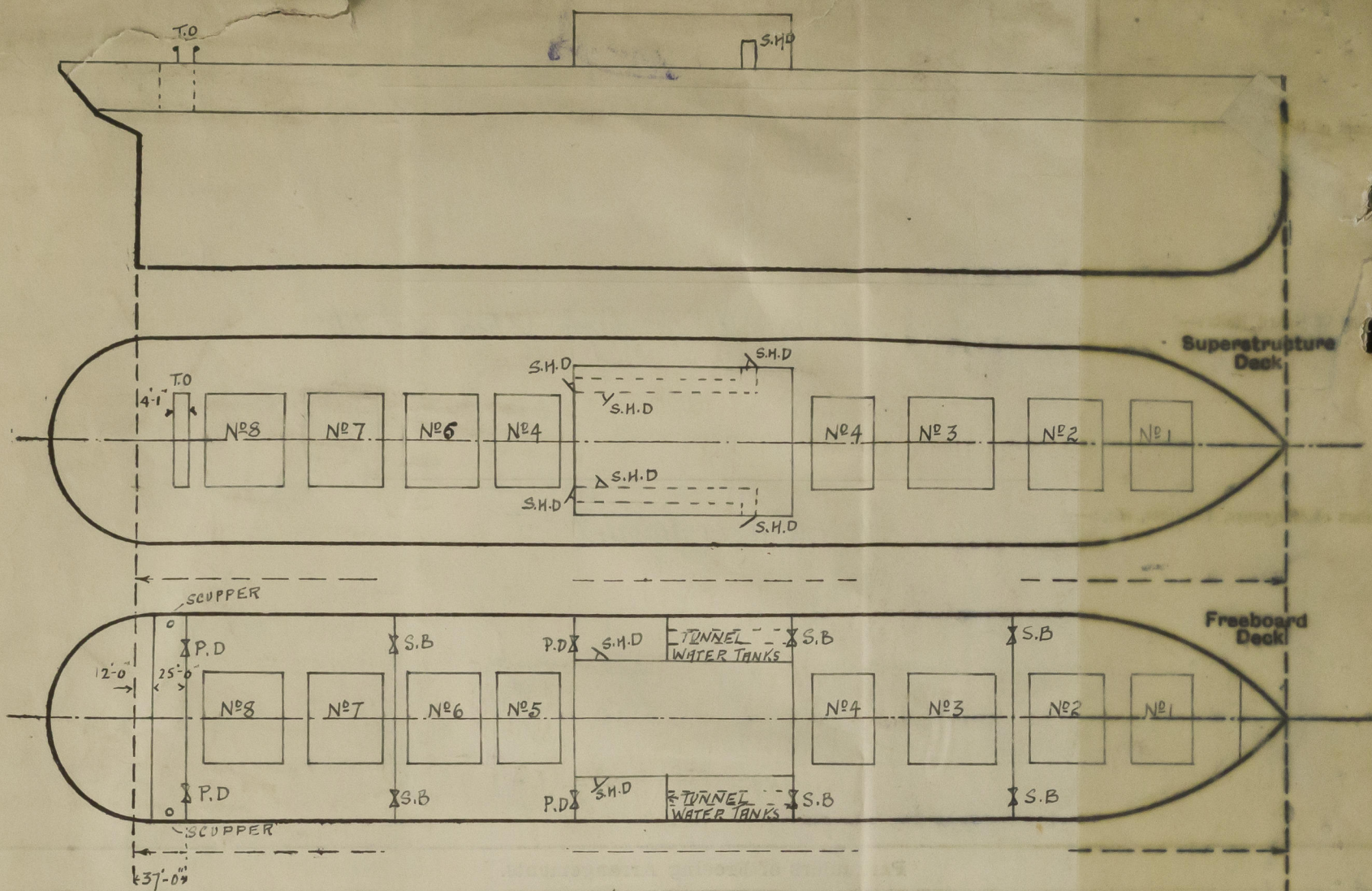


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Superstructure bulkheads, trunks, deck openings, hatchways, extent, and thickness of sheathing on the freeboard deck, gangway, cargo and coaling ports, and any other openings, etc., with the thickness of the ship are to be shewn on the following sketches:—



S.B. Stem boards in angles full height
P.D. Portable wood doors secured by hooked bolts
S.H.D. Steel hinged doors.

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

On Freeboard Deck, ladder access holes fitted with coverings 9" high and battening down arrangements

basal surveyed afloat at Seattle. Wash.,

Builder's name and yard number Ruthkew. P.B. Corp. Quincy. Mass.

Names of sister ships KATRINA LUCKENBACH, F. J. LUCKENBACH

Owners Luckenbach. S.P. Co. Inc.

Fee £ \$ 110.⁰⁰ : Received by me

{ 85 N.Y.
{ 25 Seattle



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