

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

17 AUG 1935

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having poop - bridge + forecastle

(Type of Superstructures.)

Ship's Name MOSHULLU	Nationality and Port of Registry Freiland Marihamm	Official Number 215217	Gross Tonnage 3116	Date of Build 1904
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Moulded Dimensions: Length 330.8 Breadth 46.92 Depth 28.23

Moulded displacement at moulded draught = 85 per cent. of moulded depth 7654 tons

Coefficient of fineness for use with Tables .72

Port of Survey Victoria, B.C.

Date of Survey May 28, 29, 30 June 19, July 10

Name of Surveyor Albert

Particulars of Classification L.R.

<p>Depth for Freeboard (D) <u>.21</u></p> <p>Moulded depth <u>28.23</u></p> <p>Stringer plate <u>.048</u></p> <p>Sheathing on exposed deck <u>Aluminum</u></p> <p>$T \left(\frac{L-S}{L} \right) = .25 \times .6394 = .16$</p> <p>Depth for Freeboard (D) = <u>28.41</u></p>	<p>Depth correction</p> <p>(a) Where D is greater than Table depth (D - Table depth) R = $(28.41 - 27.57) 2.323 = +1.95$</p> <p>(b) Where D is less than Table depth (if allowed) (Table depth - D) R = $.84$</p> <p>If restricted by superstructures <input checked="" type="checkbox"/></p>	<p>Round of Beam correction</p> <p>Moulded Breadth (B) <u>46.92</u></p> <p>Standard Round of Beam = $\frac{B \times 12}{50} = 11.26$</p> <p>Ship's Round of Beam = <u>12.00</u></p> <p>Difference <u>.74</u></p> <p>Restricted to</p> <p>Correction = $\frac{\text{Diff}^2}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.74^2}{4} \times .6443 = -.12$</p>
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DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S _i)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	20	20.00	7.5	-	20.00
" overhang5	.25	-	-	.25
R.Q.D. enclosed ...	-	-	-	-	-
" overhang ...	-	-	-	-	-
Bridge enclosed...	62	62.00	-	-	62.00
" overhang aft ...	4.5	3.37	7.5	-	3.37
" overhang forward	.5	.25	-	-	.25
F'cle enclosed <u>Open</u> ...	<u>31.8</u>	31.80	7.5	-	31.80
" overhang ...	-	-	-	-	-
Trunk aft ...	-	-	-	-	-
" forward ...	-	-	-	-	-
Tonnage opening aft ...	-	-	-	-	-
" " forward	-	-	-	-	-
Total ...	119.30	117.67	-	-	117.67

Standard Height of Superstructure	6.808
" " R.Q.D.	<input checked="" type="checkbox"/>
Deduction for complete superstructure	28.00
Percentage covered $\frac{S}{L} =$	36.06
" " $\frac{S_i}{L} =$	35.57
" " $\frac{E}{L} =$	35.57
Percentage from Table, Line A.	20.62
(corrected for absence of forecastle (if required))	-
Percentage from Table, Line B.	27.57
(corrected for absence of forecastle (if required))	-
Interpolation for bridge less than .2L (if required)	$20.62 + (6.95 \times \frac{65.62}{66.16})$
Deduction = $28.00 \times .2751$	$= 20.62 + 6.89 = 27.51$
	$= - 7.70$

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ...	43.08	1		43.08	55	55.00	1		55.00
$\frac{1}{8}L$ from A.P. ...	19.17	4		76.68	23.25	23.25	4		93.00
$\frac{3}{8}L$ " ...	4.74	2		9.48	8	8.00	2		16.00
Amidships ...	-	4		-	0	-	4		-
$\frac{5}{8}L$ from F.P. ...	9.48	2		18.96	13.75	13.75	2		27.50
$\frac{7}{8}L$ " ...	38.34	4		153.36	44.25	44.25	4		177.00
F.P. ...	86.16	1		86.16	87.75	87.75	1		87.75
Total ...				387.72					456.25

Mean actual sheer aft = Sum

Mean standard sheer aft = Sum

Mean actual sheer forward = Sum

Mean standard sheer forward = Sum

Length of enclosed superstructure forward of amidships = > .1L

" " aft of " = .0465L

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{68.53}{18} \times (.75 - .1803) = -2.17$

If limited on account of midship superstructure. $2.17 \times \frac{.1465}{.2000} = -1.59$

If limited to maximum allowance of $1\frac{1}{2}$ ins. per 100 ft.

Deduction for Tropical Freeboard.

Addition for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = 28.50

Summer freeboard = 5.84

Moulded draught (d) = 22.66

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = Nil

Addition for Winter North Atlantic Freeboard (if required) = 75%

Deduction for Fresh Water.

Displacement in salt water at summer load water line

$\Delta =$

Tons per inch immersion at summer load water line

T =

Deduction = $\frac{\Delta}{40T}$ inches

$\frac{22.66}{4} = 5.67 = 144$

$= 5\frac{3}{4}$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

$\frac{.72 + .62}{1.24} = \frac{1.34}{1.24}$

	+	-
Depth Correction ...	1.95	-
Deduction for superstructures ...	-	7.70
Sheer correction ...	-	1.59
Round of Beam correction ...	-	0.12
Correction for Thickness of Deck amidships ...	1.08	-
Other corrections, scantlings, etc. ...	-	-
	3.03	9.41

Summer Freeboard = 70.06

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck: 75%

Tropical Fresh Water Line above Centre of Disc ...	144	Tropical Fresh Water Freeboard ...	1779
Fresh Water Line " " ...	144	Fresh Water " " ...	1635
Tropical Line " " ...	Nil	Tropical " " ...	1779
Winter Line below " " ...	Nil	Winter " " ...	1779
Winter North Atlantic Line " " ...	75%	Winter North Atlantic " " ...	1854

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PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
Description of Hatchway	No 1	No 2	No 3	No 4		Under poop forecabin			
Dimensions of Hatchway	8'7 1/2 x 9'4"	21'5 x 14'	21'5 x 14'	13 x 10'2 1/2"		4 x 4'	4 x 4'		
COAMINGS									
Height above Deck	30"	33"	33"	33"		3 1/2" plate	3 1/2"		
Thickness	3/8"	3/8"	3/8"	3/8"		1 1/2" high	1 1/2" high		
Stiffeners	None	None	None	None					
Brackets, Stays	None	None	None	None					
HATCH BEAMS									
Number	Two	Two	Two	One					
Spacing	7'2"	7'2"	7'2"	6'5"					
Scantling and Sketch	1" x 6" x 3/4"	1" x 6" x 3/4"	1" x 6" x 3/4"	1" x 6" x 3/4"					
Bearing Surface	3 x 7'	3 x 7'	3 x 7'	3 x 7'					
FORE AND AFTERS									
Number	One	Three	Three	One					
Spacing	4'2"	3'5"	3'5"	5'1"					
Unsupported Lengths	8'7 1/2"	7'	7'	6'5"					
Scantling and Sketch	1" x 7" x 3/4"	1" x 7" x 3/4"	1" x 7" x 3/4"	1" x 7" x 3/4"					
Bearing Surface	3 x 7'	3 x 7'	3 x 7'	3 x 7'					
HATCH COVERS									
Material	Wood	Wood	Wood	Wood		Wood	Wood		
Thickness	2 1/2"	2 1/2"	2 1/2"	2 1/2"		2 1/2"	2 1/2"		
How fitted	As shown	As shown	As shown	As shown		As shown	As shown		
Bearing Surface	2 1/2"	2 1/2"	2 1/2"	2 1/2"		2 1/2"	2 1/2"		
Spacing of Cleats	24"	24"	24"	24"		24"	24"		
Number of Tarpaulins	2	2	2	2		2	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. Eyes riveted to coaming sides.*

Particulars of fiddle, funnel and ventilator coamings: *DTB has efficient funnel and umbrella.*

Particulars of Flush Bunker Scuttles: *None.*

Particulars of Companionways: *None.*

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

1 Vent forward of poop 18" dia. Coaming 1/4" height 3'0"
 1 " aft of bridge mast 21" " " " 3'0"
 2 " " bridge 15" " " " 3'0"
 2 " " fore 15" " " " 3'0"
 2 " aft of forecabin 12" " " " 3'0"
All vents fitted with plugs and canvas covers.

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

None.

Particulars of Gangway Cargo and Coaling Ports:—

*in Tween deck, 32' x 28' deck. Flat plate door 1/2" framed by angle 6 x 3 x 1/2"
 Two double angles on door for dogs. 3 x 4 x 1/8" with two Eye bolts in each 1 1/2" dia.
 Strong lugs - double bar 3 x 1/4"
 Frame on shell 7 x 3 1/2 x 1/2" with reverse bars to frame depth and face plate all around.
 One side frame in way of door cut and bracketed top and bottom.
 There are 4 doors in all. On Starboard side one forward of No 2 hatch and one forward of No 3
 On Port side one aft of No 2 hatch and one aft of No 3
*all efficient and water-tight**

Particulars of Scuppers and Sanitary Discharge Pipes:—

*All Scuppers and Sanitary discharges are above freeboard deck
 Brass Storm valves fitted*

Particulars of Side Scuttles:—

*Store rooms under forecabin deck - one port in each 6" dia. heavy glass, metal frames and dead lights.
 Bridge front 10 ports 9 1/2" dia. metal frames, heavy glass.
 aft. Bulkhead 8 ports 12" dia metal frames heavy glass.
 Rooms under poop 6" dia ports, heavy glass, metal frames and dead lights.*

Particulars of Guard Rails:—

*On forecabin 3 Bar open rail 3'3" high. top rail 1 1/2" dia lower rail 3/4" dia.
 Stanchions 1 3/4" dia spaced 4'6"*

Particulars of Gangways, Lifelines, etc:—

*Gangway, forecabin to bridge. Bridge to poop
 Wood platform 2'10" wide - 2 1/4" planking. Handrail stanchions 1 1/2" dia. spaced 6 feet.
 Wire rail 3/4" dia height 36"
 platform supported by 2" dia pillars fitted into metal deck sockets. 10' spacing*

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	130	4'9"	26 x 14 36 x 18 36 x 25	One two two	25.6	26
Forward Well	87	4'9"	36 x 18 36 x 26 22 x 14	2 1	17.6	17.4

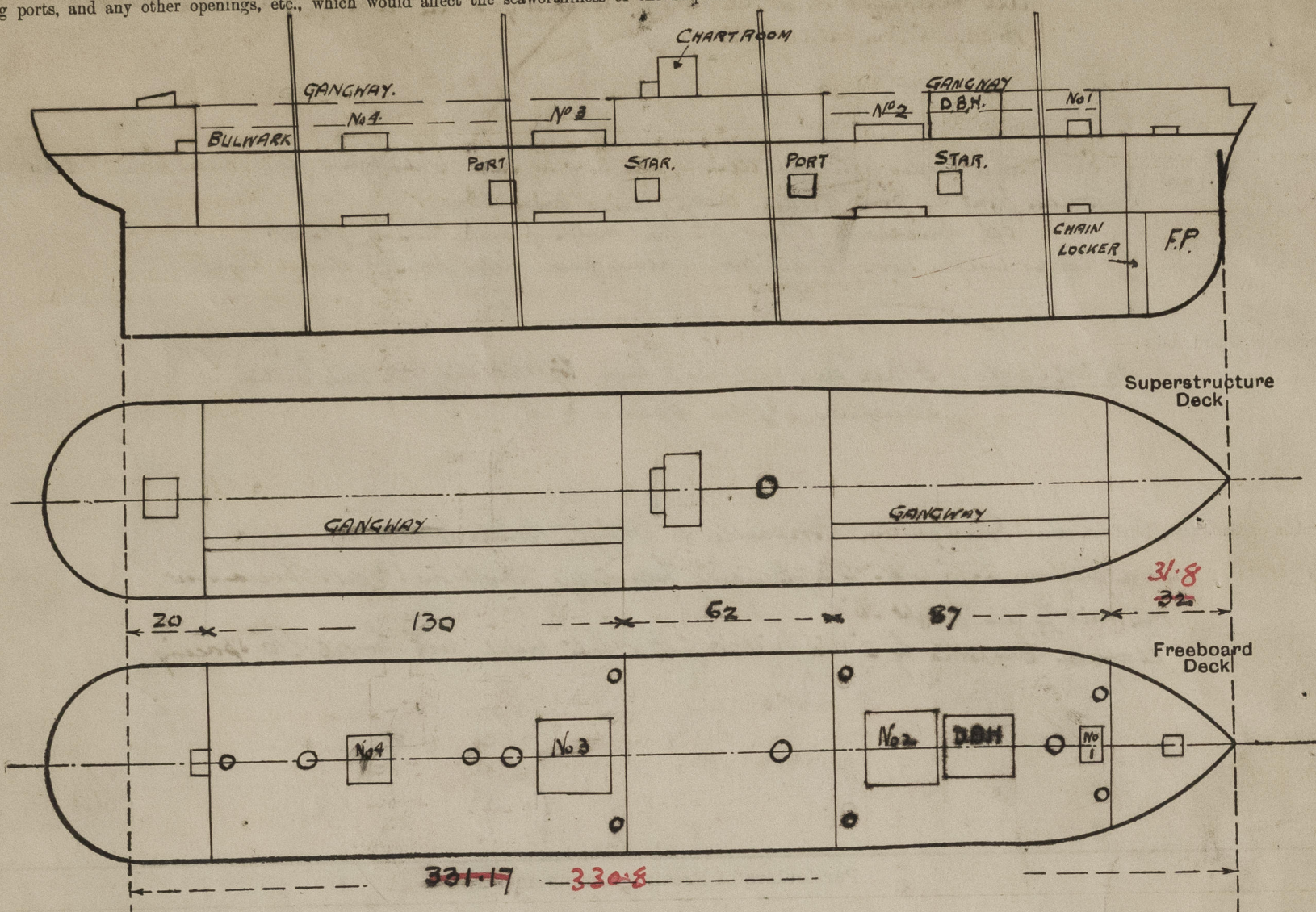
State position of each freeing port ... After Well:—
 (F. and A. position and height above deck edge) } Forward Well:—
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such:—
*Evenly spaced 12" above deck.
 Heavy hinged doors.*

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	3/8 x 30	7/16	7 x 3 x 5	26	Bracketed at bottom	4'10" x 2'5"	14"	7'5"
Raised Quarter Deck Bulkhead								
Bridge, After Bulkhead	3/8 x 30	7/16	7 x 3 x 7 1/2	30	Bracketed T & B	4'10" x 2'2"	14"	7'5"
Bridge, Forward Bulkhead	1/2 x 24	3/8	9 x 7 x 3 1/2 x 5	27	Bracketed T & B	5'0" x 2'0"	14"	7'5"
Forecabin 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								
Deckhouses on Fore Deck Ships	1 1/2 x 20	2" rivet	5 1/2 x 5 1/2	24		4'2" x 2'0"	20"	8'0"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	Two Teak doors 2" thick - opening from both sides
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	One Teak door. Port side - 2" thick - opening from both sides.
Bridge, Forward Bulkhead	Steel doors. Hinged 3/8" plate. upper & lower halves. opening from both sides
Forecabin Bulkhead	open
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	
Deckhouses on Fore Deck Ships	Wood door 2" thick. Hinged. opening from both sides (Donkey Boiler Room)

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:— Examined vessel on dry dock and afloat at Esquimaux. Survey now carried out for classification in Lloyd's Register. Rudder lifted and examined. Plating drilled. Two port holes in lower deck amidships and two in way of fore peak now permanently closed by riveted plates. One additional freeing port now fitted each side in forward hold, and two additional each side in after hold. Hatch for and afters now fitted ahead to comply with regulations and bearing surface of sockets increased. Examined hatchways and fastenings, vents, bulkheads etc. The arrangements for the protection of openings, guard rails, freeing ports, and means of access to crew's quarters are satisfactory. The hull is in good condition, internally and externally, and well preserved. The official number 215217 is as shown in all old Register books. The copy of Ship papers with bill of sale shows 215127.

Note. This vessel was originally built to Germanischer Lloyd class and later transferred to American Bureau.

Builder's name and yard number H. Hamilton & Co. Ltd Glasgow No 171.

Names of sister ships

Owners Gustaf Erikson. Marihamn. Finland.

Fee £ 60.00
Alterations 20.00
Expenses 20.00

Received by me.

Rpt. 9a.

Port of Vancouver B.C.

Continuation of Report No. 211 dated July 10 1935

on the

Sailing Ship MOSHULU.

All four cargo doors have been specially examined. They are efficient, have been overhauled, re-jointed and tested.

The freeboards have been correctly marked according to instructions and verified. Sep. 11. 1935.

Noted on report
10/13
22/9/35

A. Scott.

Additional fee - 20.00



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