

Rpt. C.11.

Lloyd's Register of Shipping.
SURVEYS FOR FREEBOARD.

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having

Shell deck with tonnage opening and
forecastle on shell deck

(Type of Superstructures.)

Port of Survey

New York

Date of Survey

Sept. 3, 1932

Name of Surveyor

W. H. Bennett

Ship's Name

M. S. "Silversandal"

Nationality and Port of Registry

London
British

Official Number

162478

Gross Tonnage

6770

Date of Build

1930-9

Moulded Dimensions: Length

455

Breadth

61.75

Depth

30'-6 1/2"

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

14949

tons

Coefficient of fineness for use with Tables

.717

Particulars of Classification

+ 100 A1

Carrying oil fuel or passengers & cargo 150° F.
for 24 hours after fire tank is deep 100°

Depth for Freeboard (D)

Moulded depth ... 30.54

Stringer plate04

Sheathing on exposed deck (None)

 $T \left(\frac{L-S}{L} \right) =$

Depth for Freeboard (D) =

30.58

Depth correction

(a) Where D is greater than Table depth
(D-Table depth) R =

(30.58-30.33) 3 = +.75"

(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) 61.75

Standard Round of Beam = $\frac{B \times 12}{50} = 14.82$

Ship's Round of Beam = 15 1/2"

Difference .68

Restricted to

Correction = $\frac{\text{Diff}^{\circ}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.68}{4} \times .0054 = \text{NIL}$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Poop enclosed ...	41.42	41.42	11'	✓	41.42
" overhang33	.17		✓	.17
R.Q.D. enclosed ...					
" overhang ...					
Bridge enclosed ...			9'-6"		
" overhang aft ...	408.25	408.25	to		408.25
" overhang forward33	.25			.25
" overhang ...			12'-6"		
Trunk aft ...					
" forward ...	4.67				
Tonnage opening aft ...	5.33	2.46	11'		2.46
" forward ...					
Total ...	455.00	452.55			452.55

Standard Height of Superstructure

7'-6"

R.Q.D.

Deduction for complete superstructure

42.00

Percentage covered $\frac{S}{L} = 100\%$ $\frac{S_1}{L} = 99.46\%$ $\frac{E}{L} = 99.46\%$ Percentage from Table, Line A. 99.33%
(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 = $42 \times .9933 = 41.72$

SHEER CORRECTION.

Station	Standard Ordinate	S	Product	Actual Ordinate	Effective Ordinate	S	Product
A.P. ...	55.50	1	55.50	38.75 ⁺⁴²	80.75	1	80.75
1/4 L from A.P. ...	24.70	4	98.80	16.6	35.93	4	143.72
1/2 L " ...	6.10	2	12.20	4.15	8.88	2	17.76
Amidships ...		4				4	
3/4 L from F.P. ...	12.20	2	24.40	8.9	14.46	2	28.92
1/4 L " ...	49.40	4	197.60	35.8	58.52	4	234.08
F.P. ...	111.00	1	111.00	71.50 ⁺⁶⁰	131.50	1	131.50
Total ...			499.50				636.73

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{137.23}{18} (.75 - .50) = -1.91$

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 = 30.58
Summer freeboard = 4.02
Moulded draught (d) = 26.56Inclusion for Tropical freeboard and addition for
Winter freeboard = $\frac{d}{4}$ inches = 6.64 = 6 3/4"

Addition for Winter North Atlantic Freeboard (if required) = ✓

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 15570$

Tons per inch immersion at summer load water line

T = 56.5

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

= 6.88 = 7"

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

 $\frac{.68 \times .717}{1.36} = \frac{1.397}{1.36}$

Depth Correction75

Deduction for superstructures ... 41.72

Sheer correction ... 1.91

Round of Beam correction ...

Correction for Thickness of Deck amidships ...

Other corrections, scantlings, etc. ...

Summer Freeboard = 48.65

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

Tropical Fresh Water Line above Centre of Disc ... 13 3/4"

Fresh Water Line " " ... 7"

Tropical Line " " ... 6 3/4"

Winter Line below " " ... 6 3/4"

Winter North Atlantic Line " " ... ✓

Tropical Fresh Water Freeboard ... 4'-0 1/4"

Fresh Water " " ... 2'-10 1/2"

Tropical " " ... 3'-5 1/4"

Winter " " ... 3'-5 1/2"

Winter North Atlantic " " ... 4'-7"

16 SEP 1932

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS										
On Shelter Deck					On Upper Deck					
Description of Hatchway	No. 1.	No. 2.	No. 3.	No. 4.	No. 1.	No. 2.	No. 3.	No. 4.		
Dimensions of Hatchway	31'6" x 21'	32' x 21'	29'4" x 21'	9'6" x 17'	31'6" x 21'	32' x 21'	12' x 8'	32' x 21'	4'-8" x 21'	
COAMINGS	Height above Deck	36"	Same as		9" B.A.	9" B.	24"	12"	Tonnage opening on Shelter deck	
	Thickness	.50			.44	.44	.50	.50		
	Sides	.50			.44	.44	.50	.50		
	Ends	.50			.44	.44	.50	.50		
HATCH BEAMS	Stiffeners	7 x 3 1/2 x .44	No. 1.		None	None	None	None	aft is fitted with 3 1/2" wood temporary cone fitted F + Aft.	
	Brackets, Stays	3			None	None	None	None		
	Number	5			5	5	5	5		
	Spacing	5.25			5.25	5.33	5.33	5.33		
FORE AND AFTERS	Scantling and Sketch	4 1/2 x 3 x .42	Same as		4 x 3 1/2 x .44	4 x 3 1/2 x .44	None	3 x 3 x .44		
		15 1/2 x .32	No. 1.		24 x .44	24 x .44		13 x .44		
		4 1/2 x 3 x .42			4 x 3 1/2 x .44	4 x 3 1/2 x .44		3 x 3 x .44		
	Bearing Surface	3 1/2			3 1/2	3 1/2		3 1/2		
HATCH COVERS	Material	wood			wood	wood	Steel	Insulation		
	Thickness	2 1/2	Same		2 1/2	2 1/2	.50"	Rug		
	How fitted	F + A.	as No. 1.		F + A.	F + A.	Hinged	hatches		
	Bearing Surface	3			3	3	stiffened	10" lb		
Spacing of Cleats	24	Same					(bolts 12" apart)	None		
Number of Tarpaulins	3	as No. 1.					None	None		

*Are wood fore and afters steel shod at all bearing surfaces? ☒
 Are battens and wedges efficient and in good condition? *yes*
 Are tarpaulins in good condition and in accordance with rule requirements? *yes strong and waterproofed*
 Are lashings provided in accordance with rule requirements? *yes. Bon. Nos 1-2-3-4-5-2 On No. 6.*

Particulars of fiddley, funnel and ventilator coamings:—

No fiddley. The funnel is riveted to steel boat deck plating.
 One opening in funnel on after side 55" x 19" sill 18" door of steel with handle both sides. The E. R. skylight coaming is 12" @ sides, 48" @ centre 5 1/16" thick, and closed with sturdy steel hinged flaps, secured from below.
 Fine E. R. vents each 24" diam. 8 ft. coaming above Boat deck x 7 1/16" thick. No stays. Provided with wood, cones and canvas.

Particulars of Flush Bunker Scuttles:—

None

Particulars of Companionways:—

None

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

The holds are ventilated by 36", 30" + 24" dia. vents. Coamings are generally 60" x 7 1/16" and bracketed to deck. Vents to crew's accommodation spaces and peaks. Three at 12" dia. four at 9" dia. and ten at 6" dia. all generally 30" coamings by 5 1/16". Wood cones and canvas provided for all these vents.

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

Air pipes to double bottom and peak tanks are 3" and 4" dia; coamings 27" high. ~~4"~~ wood plugs ~~or valves~~ provided.

Particulars of Gangway Cargo and Coaling Ports:—

None



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Particulars of Scuppers and Sanitary Discharge Pipes — The shelter deck is scuppered by means of 7"x4" oval holes (8 P. 8 S.) thro' gunwale bar. Seven scuppers (each side) are led from shelter tween deck space and discharge about 24" below 2nd deck (upper). Bronze storm valves are fitted on all of these pipes. There is no crew accommodation below the level of the shelter deck. Storm (bronze) Valves are fitted on all discharges from spaces above the shelter deck.

Particulars of Side Scuttles: — No portlights are fitted except in upper forecabin space, and these are all provided with O.S. deadlights.

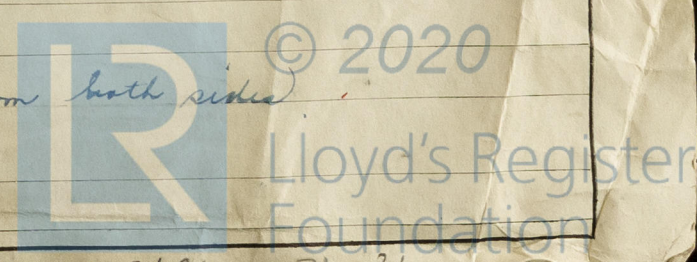
Particulars of Guard Rails: — Plate bulwarks fitted amidships (see sketch) 42" high, with 6" B.A. rail and stanchions about 6 ft. apart. Open rails forward and aft are 42" high, and have three rods. Upper forecabin has open rails 46" high with three rods.

Particulars of Gangways, Lifelines, etc.: — Hand rails are fitted on sides of houses on shelter deck. Lifelines are arranged 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	5'-4"	11 ft.	25" x 12"	1 P. 1 S.	2.08'	✓
Forward Well	✓	✓	✓	✓	✓	✓
State position of each freeing port (F. and A. position and height above deck edge) { After Well: — In well aft. 15" above deck. Forward Well: — ✓						
State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: — Hinged flap with one strong back.						
Additional area where sheer is less than standard. ✓						

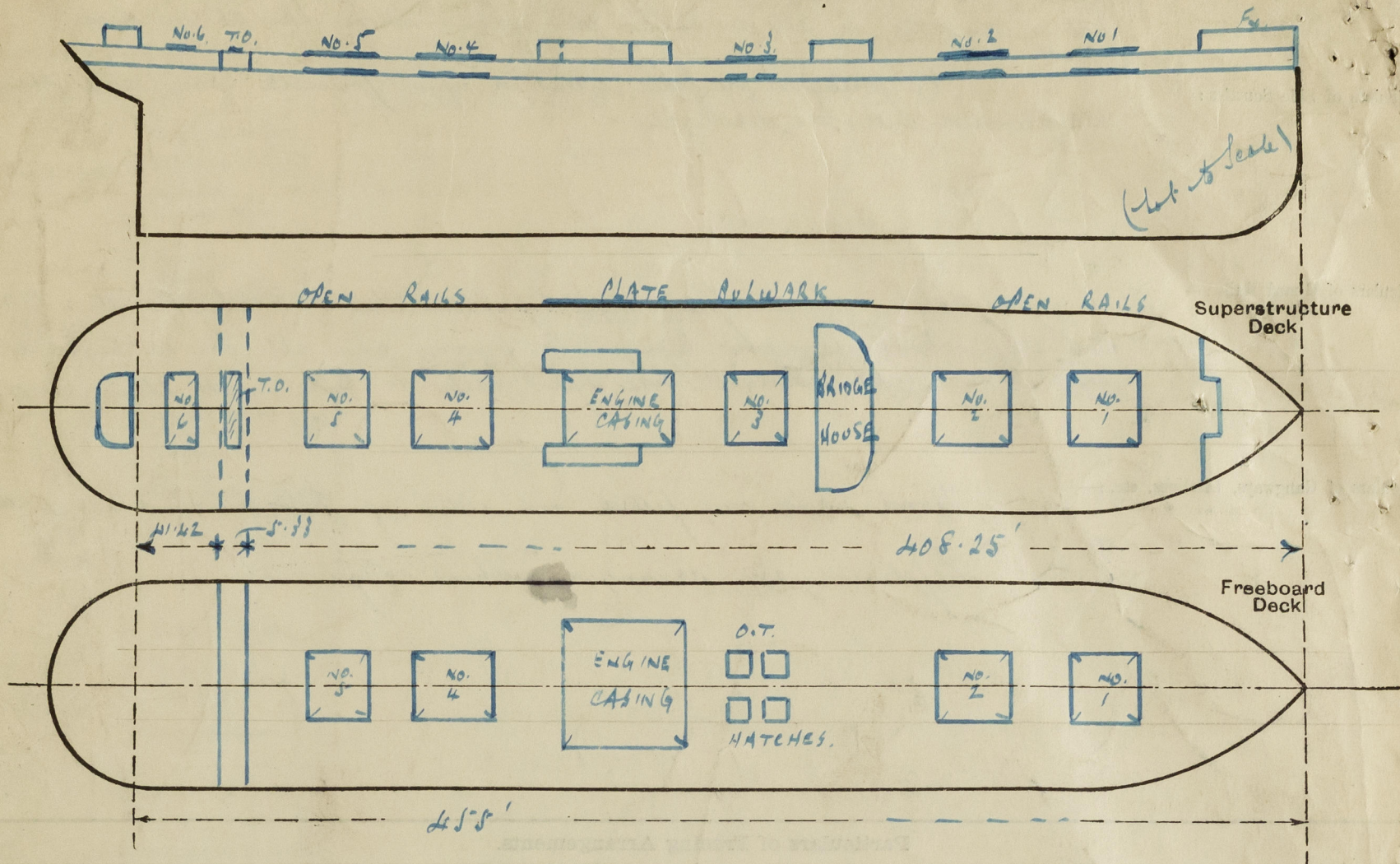
Particulars of Superstructures, Trunks, Casings, Deckhouses.								
	Coaming	Plating	Stiffeners	Spacing	End Attachments of Stiffeners	Size of Openings	Height of Sills	Height of Casings
Poop Bulkhead	✓	1/4"	5x3x3/8 O.A.	42"	None	5' x 3'	18"	11'
Raised Quarter Deck Bulkhead ...	✓							
Bridge, After Bulkhead	✓	1/4"	5x3x3/8 O.A.	42"	None	5' x 3'	18"	11'
Bridge, Forward Bulkhead	✓							
Forecastle Bulkhead	✓							
Trunk, Aft	✓							
Trunk, Forward	✓							
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓							
Exposed Machinery Casings on Superstructure Decks (partly exposed) ...	✓	5/16"	3 1/2 x 3 x 3/8 O.A.	32"	Plate top	68" x 24"	18"	8' 3"
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓	Strongly constructed				None		
Deckhouses on Flush Deck Ships ...	✓							

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	2 1/2" Storm boards full height, in riveted channels.
Raised Quarter Deck Bulkhead ...	✓
Bridge, After Bulkhead	2 1/2" " " " " " See CH could fall 19-8-55
Bridge, Forward Bulkhead	✓
Forecastle Bulkhead	✓
Exposed Machinery Casings on Free-board or Raised Quarter Decks ...	✓
Exposed Machinery Casings on Superstructure Decks	5/16" Steel hinged doors, openable from both sides.
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	✓ No openings
Deckhouses on Flush Deck Ships ...	✓



Silverwalnut.

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:—



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

This vessel was surveyed at Silver Line Pier, foot of 84th Street, Brooklyn, N.Y. while lying in the water.

Deadweight at full draft of 26-3/4"	9783 tons.
" " " " " 25-2"	9000 "
Low - full draft " " " 26-6"	86-80.
" " " " " 25-6"	86-05.

} Taken from
Builder's Capacity
Plan.

This vessel in my opinion, complies with the requirements of the International Load Line regulations, and may be assigned new freeboards subject to plugs being fitted to all air pipes.

W.D.

Builder's name and yard number *Harland & Wolff Ltd. (Belfast)*

Names of sister ships *Silverwalnut Silvercypress Silverteak*

Owners *Silver Line Ltd.*

Fee *90.00*

Received by me

Charged @ New York



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