

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

Index No. 19206
(For London Office only.)

100081-17/1937

Computation of Freeboard for Steamer, Sailing Ship, Tanker					Port of Survey <i>Constantia</i>
having <i>forecastle and superstructure decks</i>					Date of Survey <i>26-27th Aug & 10th September</i>
(Type of Superstructures.)					Name of Surveyor <i>Jack Corbin assisted by acting surveyor Mr. Norman</i>
Ship's Name <i>Har Lion</i>	Nationality and Port of Registry <i>114941</i>	Gross Tonnage <i>2508</i>	Date of Build <i>1907</i>	Particulars of Classification <i>+100 A</i>	
Moulded Dimensions: Length <i>94.54 m</i> Breadth <i>12.35 m</i> Depth <i>6.54 m</i>					
Moulded displacement at moulded draught = 85 per cent. of moulded depth					tons
Coefficient of fineness for use with Tables					

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>6.540 m</i>	(a) Where D is greater than Table depth (D—Table depth) R =	Moulded Breadth (B) <i>12.35 m</i>
Stringer plate <i>0.014 m</i>		Standard Round of Beam = $\frac{B \times 12}{50} =$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$	(b) Where D is less than Table depth (if allowed) (Table depth—D) R =	Ship's Round of Beam = <i>0.254 m</i>
		Difference
Depth for Freeboard (D) = <i>6.619 m</i>	If restricted by superstructures	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		<i>64.70 m</i>	<i>2.52 m</i>		
.. overhang					
R.Q.D. enclosed					
.. overhang					
Bridge enclosed					
.. overhang aft					
.. overhang forward					
Fore enclosed		<i>10.35 m</i>	<i>2.56 m</i>		
.. overhang					
Trunk aft					
.. forward					
Tonnage opening aft					
.. forward					
Total					

Standard Height of Superstructure

.. .. R.Q.D.

Deduction for complete superstructure

Percentage covered $\frac{S}{L} =$

.. .. $\frac{S_1}{L} =$

.. .. $\frac{E}{L} =$

Percentage from Table, Line A.
(corrected for absence of forecable (if required))

Percentage from Table, Line B.
(corrected for absence of forecable (if required))

Interpolation for bridge less than 2L (if required).

Deduction =

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P.		1			<i>0.725</i>		1		
$\frac{1}{4}L$ from A.P.		4			<i>0.170</i>		4		
$\frac{2}{4}L$		2			<i>0.080</i>		2		
Amidships		4			<i>0</i>		4		
$\frac{3}{4}L$ from F.P.		2			<i>0.120</i>		2		
$\frac{1}{4}L$		4			<i>0.590</i>		4		
F.P.		1			<i>1.525</i>		1		
Total									

Mean actual sheer aft =

Mean standard sheer aft =

Mean actual sheer forward =

Mean standard sheer forward =

Length of enclosed superstructure forward of amidships =

.. .. aft of .. =

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

If limited on account of midship superstructure.

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

Deduction for Tropical Freeboard.	Deduction for Fresh Water.	TABULAR FREEBOARD corrected for Flush Deck (if required)
Addition for Winter and Winter North Atlantic Freeboard.	Displacement in salt water at summer load water line	Correction for coefficient
Ft.	$\Delta =$	
Depth to Freeboard Deck =	Tons per inch immersion at summer load water line	Depth Correction
Summer freeboard =	T =	Deduction for superstructures
Moulded draught (d) =	Deduction = $\frac{\Delta}{40T}$ inches	Sheer correction
Deduction for Typical freeboard and addition for		Round of Beam correction
Winter freeboard = $\frac{d}{4}$ inches =		Correction for Thickness of Deck amidships
Addition for Winter North Atlantic Freeboard (if required) =		Other corrections, scantlings, etc.
		Summer Freeboard =

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Wood, Steel, Deck :-			
Tropical Fresh Water Line above Centre of Disc		Tropical Fresh Water Freeboard	
Fresh Water Line		Fresh Water	
Tropical Line		Tropical	
Winter Line below		Winter	
Winter North Atlantic Line		Winter North Atlantic	



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Har. L.

Particulars of fiddle, funnel and ventilator openings:— Other openings on super structure deck:—

- 1) Forward skylight, diving room on freeboard deck; coaming plate 17mm; 5 windows; height 660mm and 390mm; 4 cleats on the side and 2 on the end coaming; s. length 8.900m; breadth 720mm; 1220 x battening.
- 2) Starboard skylight for lantern; coaming plate 17mm; top cover plate 4mm; 2 scuttles; length 1.140m; breadth 530mm; height 620 and 480mm; 3 cleats on side coaming and 2 on the end coamings for tarpaulin.
- 3) Five skylights on starboard, and 2 on portside for passage on freeboard deck; length 2.000m; breadth 520mm; height 620 and 470mm; 2 windows 360x500mm; coaming 7mm; top cover 4mm; 4 cleats on side and 2 on end coamings for tarpaulin.

Particulars of Flush Bunker Scuttles:—

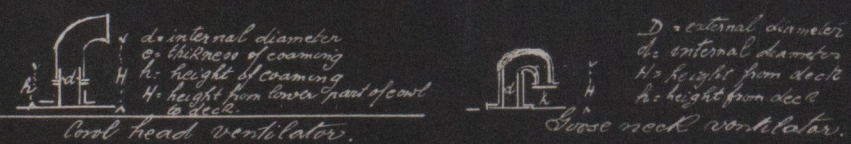
- 4) Boat deck, fiddle gratings with hinged hatches 4mm thickness; angle bars 65x65mm; length 2.000m; breadth 770mm.
- 5) Boat deck, engine room skylight; thickness of plate 6mm; length 4.570m; breadth 2.300m; 5 windows 1.020x0.630m; eye bolts in good condition.

Funnel casing, pivoted to boiler casing, no opening. In order.

1) Opening under M3 hatchway below freeboard deck; length 4.40m; breadth 4.30m; height of coaming 210mm; 2 hatch beams; 9 fore and afters (found only 3 middle ones); tarpaulin and cleats in order.

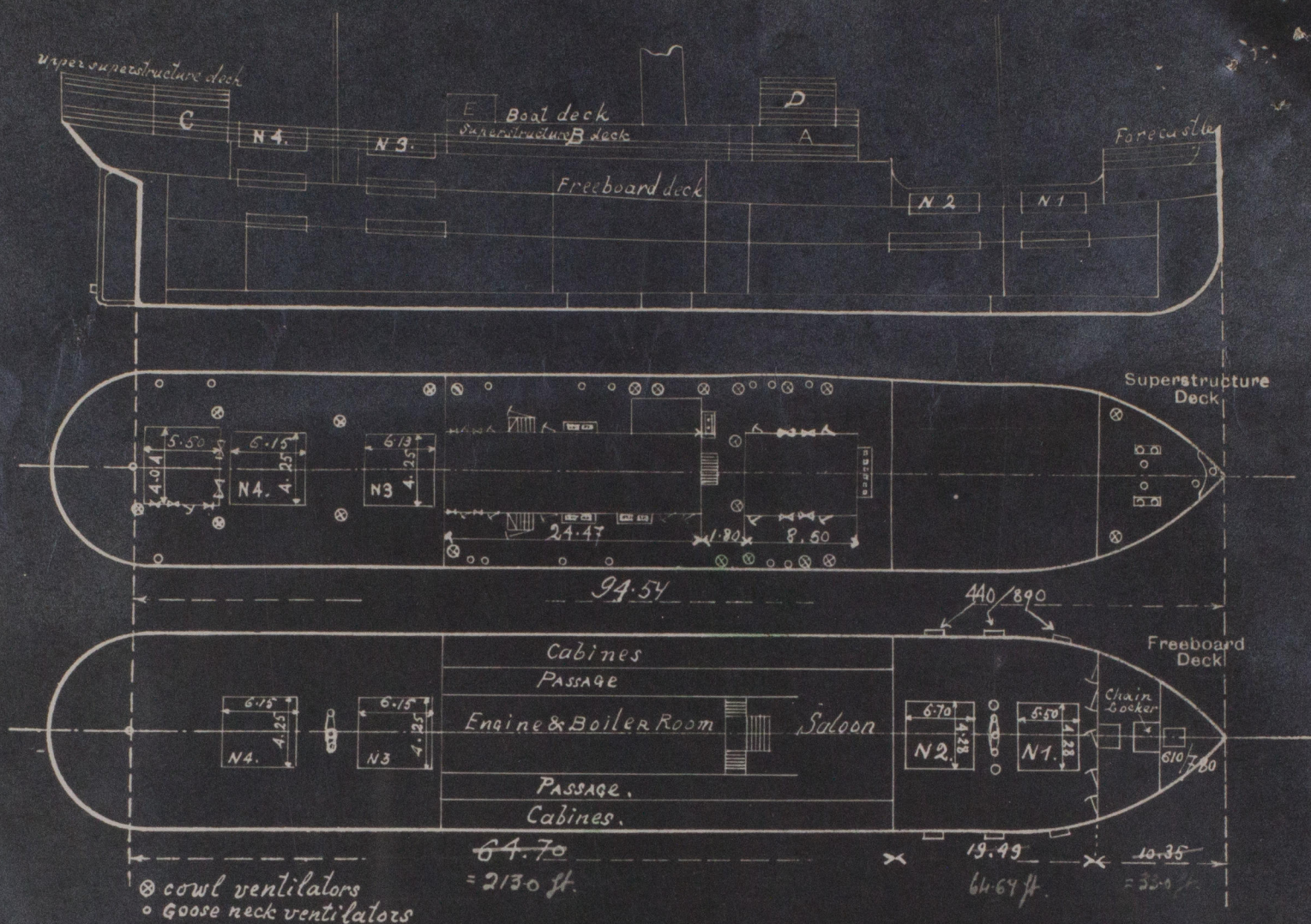
1) Opening under No 4 hatchway below freeboard deck; length 4.93m; breadth 4.20m; height of coaming 210mm; 1 hatch beam; 6 fore and afters (only 2 middle ones found); tarpaulin, cleats, hatch covers in order.

Particulars of Companionways:—



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								
Bridge, Forward Bulkhead	480 mm x 10 mm	10 mm	14 angle bars 90 x 90 x 10 mm	0.82 m	Brackets 10 mm	-	-	2.520 m
Forecastle Bulkhead	440 mm x 8 mm	8 mm	14 angle bars 70 x 70 x 8 mm	Variable	Spliced	4-452 x 0.59 m 4-452 x 0.57 m	0.44 m 0.44 m	2.565 m
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks ...								
Exposed Machinery Casings on Superstructure Decks <i>SKETCH Fig. B.</i>	425 mm x 10 mm	8 mm	70 x 60 x 7 mm	Variable 500-550 mm	Brackets and also welded to beams	10 openings steel doors	0.425 m	2.385 m
Machinery Casings within Superstructures not fitted with Class I Closing Appliances <i>SKETCH Fig. C.</i>	440 mm x 10 mm	8 mm	70 x 60 x 7 mm	Variable 800-900 mm	Attached to beams	40 openings steel doors	0.440 m	2.385 m
Deck room, sternward <i>SKETCH Fig. D.</i> Deckhouses on Flush Deck Ships	445 mm x 8 mm	7 mm	70 x 60 x 7 mm	Variable 600 mm	Spliced to beams	1 opening for steel door	0.430 m	2.265 m

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:—

- The followings are recommended:
- 1) Life lines to be provided for forward well.
 - 2) Fore and afters for hatchways to be completed.
 - 3) Coaming of starboard cowl head ventilator for N4 to be repaired.

James Gordon
 Surveyor

Builder's name and yard number *Akt. Biermeister & Wain, Copenhagen*

Names of sister ships *'Havkamel'*

Owners *Palestine Maritime Lloyd Ltd*

Fee £ *15* : *0* : *0* Received by me *(Fees not received)*
 Expenses £ *4.500*



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