

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

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Index. No.

(For London Office only.)

SEP -2 1937

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having *complete superstructure*Port of Survey *Rotterdam*

(Type of Superstructures.)

Date of Survey *28-8-1937*

Ship's Name

Nationality and Port of Official Number

Gross Tonnage

Date of Build

Name of Surveyor *R. F. Hehrmeijer*

*1/3 KONSTANTINOS
HADJIPATERAS*

*Greek
Chios*

*1913-11*Moulded Dimensions: Length *388.14'* Breadth *16.47'* Depth *36.54'*

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

Coefficient of fineness for use with Tables *.786*Particulars of Classification *+100 FT
shell deck with freeboard.*

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth <i>36.54</i>	(a) Where D is greater than Table depth (D-Table depth) R = $(36.58 - 25.88) \times 2.986 = +31.95$	Moulded Breadth (B) <i>16.47</i>
Stringer plate <i>.45"</i>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = 10.70	Standard Round of Beam = $\frac{B \times 12}{50} = 12.92$
Sheathing on exposed deck $T \left(\frac{L-S}{L} \right) =$ <i>.04</i>		Ship's Round of Beam = <i>13.00</i>
		Difference <i>.08</i>
Depth for Freeboard (D) = <i>36.58</i>	If restricted by superstructures <i>✓</i>	Restricted to <i>✓</i>
		Correction = $\frac{\text{Diff}}{4} \times \left(1 - \frac{S_1}{L} \right) = \frac{.08}{4} = -.02$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)	
Poop enclosed						Standard Height of Superstructure
" overhang						" " R.Q.D.
R.Q.D. enclosed						Deduction for complete superstructure
" overhang						Percentage covered $\frac{S}{L} =$
Bridge enclosed						" " $\frac{S_1}{L} =$ <i>Nil</i>
" overhang aft						" " $\frac{E}{L} =$
" overhang forward						Percentage from Table, Line A.
F'ole enclosed						(corrected for absence of forecastle (if required))
" overhang						Percentage from Table, Line B.
Trunk aft						(corrected for absence of forecastle (if required))
" forward						Interpolation for bridge less than .2L (if required)
Tonnage opening aft						Deduction = <i>Nil</i>
" " forward						
Total						

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product	
A.P.	<i>48.81</i>	1		<i>48.81</i>	<i>58.97</i>	<i>58.97</i>	1		<i>58.97</i>	Mean actual sheer aft = <i>Even</i>
$\frac{1}{4}$ L from A.P.	<i>21.72</i>	4		<i>86.88</i>	<i>23.90</i>	<i>23.90</i>	4		<i>95.60</i>	Mean standard sheer aft
$\frac{2}{4}$ L "	<i>5.37</i>	2		<i>10.74</i>	<i>5.98</i>	<i>5.98</i>	2		<i>11.96</i>	Mean actual sheer forward = <i>Even</i>
Amidships	-	4		-	-	-	4		-	Mean standard sheer forward
$\frac{3}{4}$ L from F.P.	<i>10.74</i>	2		<i>21.48</i>	<i>13.50</i>	<i>13.50</i>	2		<i>27.00</i>	Length of enclosed superstructure forward of amidships = <i>Nil</i>
$\frac{1}{4}$ L "	<i>43.44</i>	4		<i>173.76</i>	<i>54.01</i>	<i>54.01</i>	4		<i>216.04</i>	" " aft of " = <i>Nil</i>
F.P.	<i>97.63</i>	1		<i>97.63</i>	<i>125.98</i>	<i>125.98</i>	1		<i>125.98</i>	
Total				<i>439.30</i>					<i>535.55</i>	

Correction = $\frac{\text{Difference between sums of products}}{18} \left(.75 - \frac{S}{2L} \right) = \frac{96.25 \times .75}{18} = -4.01$

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.
Addition for Winter and Winter North Atlantic Freeboard.

Ft.
Depth to Freeboard Deck = *36.58*
Summer freeboard = *8.94*
Moulded draught (d) = *27.64*

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = *6.91 = 175*Addition for Winter North Atlantic Freeboard (if required) = *✓*

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 = $\frac{\Delta}{40 T}$ inches $d/4 = 175$

TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient

	<i>67.84 + 5.82</i>	<i>73.66</i>
	<i>786 + .68 = 1.466</i>	<i>79.40</i>
	<i>1.36</i>	
Depth Correction	<i>31.95</i>	
Deduction for superstructures	-	
Sheer correction	-	<i>4.01</i>
Round of Beam correction	-	<i>.02</i>
Correction for Thickness of Deck amidships	-	
Other corrections, scantlings, etc.	-	
	<i>31.95</i>	<i>4.03</i>
		<i>+ 27.92</i>
		<i>Summer Freeboard = 107.32</i>

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

Tropical Fresh Water Line above Centre of Disc	<i>350</i>	Tropical Fresh Water Freeboard	<i>2726</i>
Fresh Water Line " "	<i>175</i>	Fresh Water " "	<i>2376</i>
Tropical Line " "	<i>175</i>	Tropical " "	<i>2551</i>
Winter Line below " "	<i>175</i>	Winter " "	<i>2551</i>
Winter North Atlantic Line " "	-	Winter North Atlantic " "	<i>2901</i>

PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS.									
Description of Hatchway	I	II	III	IV	V	VI			
Dimensions of Hatchway	21'-6" x 7'-4"	30'-1" x 20'-0"	32'-1" x 18'-11"	25'-11" x 17'-11"	23'-10" x 17'-11"	7'-10" x 7'-10"			
COAMINGS									
Height above Deck	30"	30"	30"	30"	30"	30"			
Thickness	40	54	36	50	40	40			
Stiffeners	40	40	36	40	40	40			
Brackets, Stays			8 A. 7 x 3 x 44						
HATCH BEAMS									
Number	3	5	-	4	3	-			
Spacing	5'-4"	5'-0"	-	5'-2"	6'-0"	-			
Scantling and Sketch	PLATE 2 1/2 x 34 1/2 x 40	2 1/2 x 34 1/2 x 40	-	2 1/2 x 34 1/2 x 34	2 1/2 x 34 1/2 x 34	-			
Bearing Surface	3 1/2" angle	3 1/2" angle	3 1/2" angle	3 1/2" angle	3 1/2" angle	3 1/2" angle			
FORE AND AFTERS									
Number			centre			centre			
Spacing			8' 0" PL 4 x 50			8' 0" PL 4 x 50			
Unsupported Lengths			7' 0" 3 x 3 x 36			7' 0" 3 x 3 x 36			
Scantling and Sketch			2 wing			2 wing			
Bearing Surface			3 1/2" angle			3 1/2" angle			
HATCH COVERS									
Material	pine	3"	2 3/4"	2 3/4"	3"	2 3/4"			
Thickness	3"	3"	3"	3"	3"	3"			
How fitted	longitudinally	longitudinally	longitudinally	longitudinally	longitudinally	longitudinally			
Bearing Surface	3"	3"	3"	3"	3"	3"			
Spacing of Cleats	24" x 6"								
Number of Tarpaulins	2								

Particulars of fiddle, funnel and ventilator coamings:— Top fiddle, funnel, engine room skylight, ventilator coamings, and saddleback hatches of an efficient construction and in good condition. Hatches have a complete battening down arrangement.

Particulars of Flush Bunker Scuttles:— none fitted

Particulars of Companionways:— one steel companion way leading to fore-castle space. Side of openings 45' x 22" with 24" steel hinged doors operated from both sides.

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:— 14 ventilators cargo holds, dia. 18" coaming 40" x 40" new space 8" 30" x 36" cargo holds 10" 10' x 40" supported. Construction complies with the Rules. Coamings closed by wood plugs and canvas covers.

Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:— 1 air pipe forepeak tank 5" x 10" 7 " D.B. tanks 2" x 26" Wood plugs and canvas covers

Particulars of Gangway Cargo and Coaling Ports:— none fitted

Particulars of Scuppers and Sanitary Discharge Pipes:—

All sanitary discharges from spaces above freeboard deck, fitted with brass storm valves.

Particulars of Side Scuttles:— In crewspace (forecastle) all side scuttles fitted with hinged deadlight. All side scuttles of substantial construction. In poop space aft. side scuttles fitted with hinged deadlight.

Particulars of Guard Rails:— Round shelterdeck 3 rods through riveted stanchions (balled to riveted L lugs) 44" high x 5'-0" apart. Amidships. plain bulwark, forms no well.

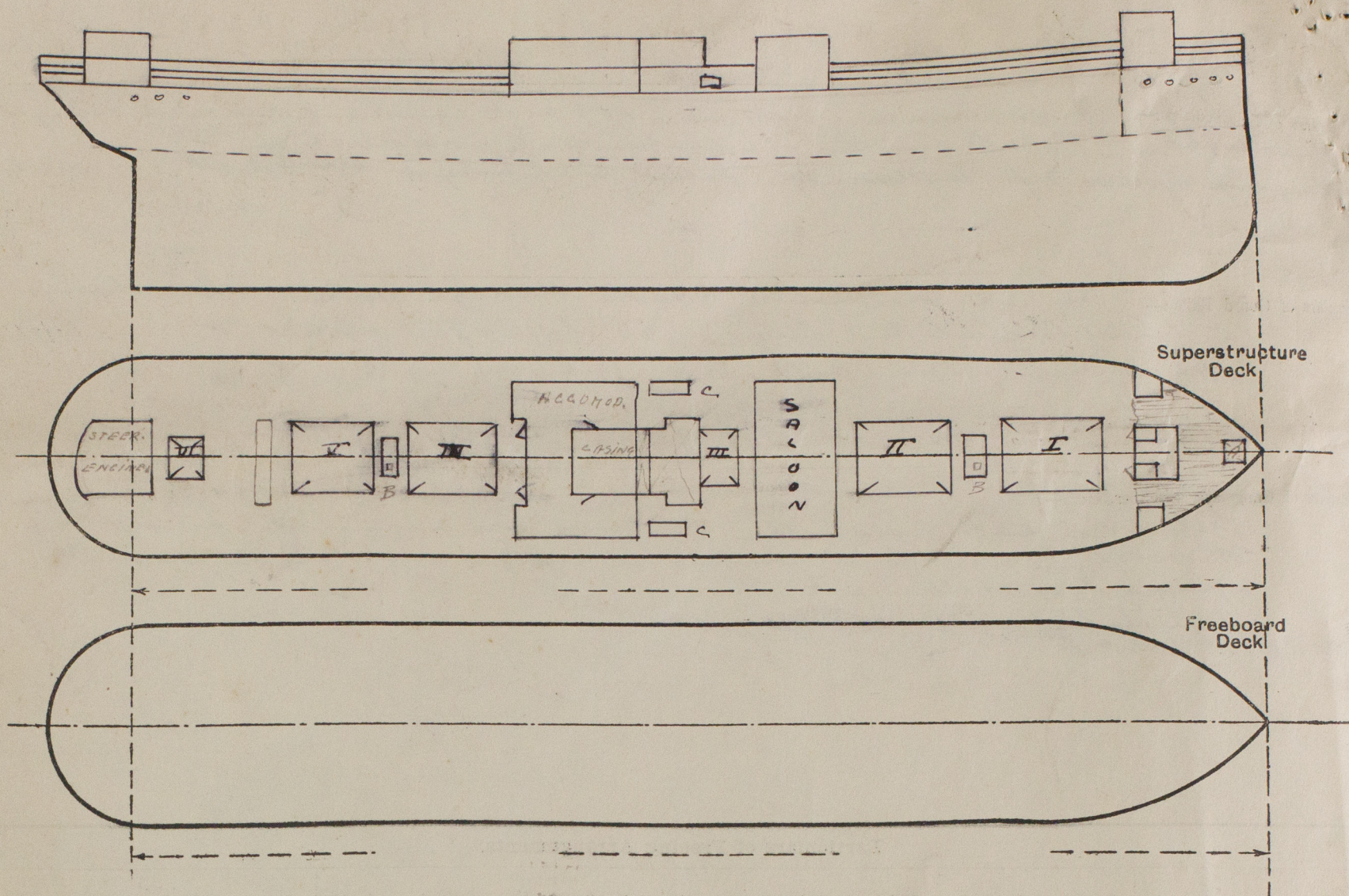
Particulars of Gangways, Lifelines, etc.:— Steel wire and manilla lifelines are available and it is a practice to fit some in rough weather on fore and after part of shelterdeck. Eyeplates and stretching screws are available.

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						
Forward Well						
State position of each freeing port (F. and A. position and height above deck edge) After Well:— 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								
Bridge, Forward Bulkhead								
Forecastle Bulkhead								
Trunk, Aft								
Trunk, Forward								
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	22" x 40"	36"	4 1/2 x 3 x 40"	20"		4'-3" x 1'-10"	24"	7'-4"
Exposed Machinery Casings on Superstructure Decks			and flanges 3"					
Machinery Casings within Superstructures not fitted with Class I Closing Appliances								
Deckhouses on Flush Deck Ships		40	flanges 3"	2'-10"	brackets top & bottom	4'-11" x 6'-11"	18"	7'-4"

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	
Raised Quarter Deck Bulkhead	
Bridge, After Bulkhead	
Bridge, Forward Bulkhead	
Forecastle Bulkhead	
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	steel hinged doors operated from both sides
Exposed Machinery Casings on Superstructure Decks	
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	
Deckhouses on Flush Deck Ships	leaf wood doors operated from both sides

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:—



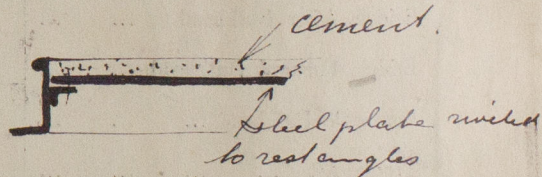
State any special features in the construction of the ship:—

Hatch A. size 3'-9" x 3'-0" casing 29" x 36 complete battening down arrangement woodhatch 2 3/4
2 access hatches B in steel masts. 2'-6" x 2'-0" casings B.A. 9' x 3' x 42 stringer
wood covers, 6 toggles

2 coal hatches on freeboard deck size 13'-0" x 3'-0" casing 30" x 40. complete battening down arrangement woodhatches 2 3/4

This vessel has been examined whilst lying afloat.

The vessel is converted into a closed shelter deck vessel. In connection herewith in the tonnage hatch a riveted plate in rectangles has been fitted and covered by cement. (see sketch) Trunk ports in tonnage well closed by riveted plates and scuppers in same well and from deck below shelter deck removed and openings closed by efficiently riveted spigot plates. Openings in 2nd deck fitted with pipes leading to bilges.



Builder's name and yard number J.R. Thompson & Son Ltd. Sunderland

Names of sister ships

Owners J.C. & A.C. Hadjipateras

Fee £ 192.- will be Received by me A.B. Hehrmeijer

expenses 1/8.-



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