

# Lloyd's Register of Shipping

## SURVEYS FOR FREEBOARD.

Index. No. 1812.  
(For London Office only.)23070  
-2 AUG 1934

Computation of Freeboard for Steamer, Sailing Ship, Tanker

having FORECASTLE, BRIDGE, POOP.Port of Survey RotterdamDate of Survey 30-7-'34Name of Surveyor E. H. WEHRMEIERParticulars of Classification +100A1.  
25. Nov 2<sup>nd</sup> N<sup>o</sup>3 - 2, '32.

(Type of Superstructures.)

Ship's Name 1/5 "ATTIKOS" Nationality and Port of Registry Greek Argosoli Official Number 323 Gross Tonnage 4078 Date of Build 1906/2<sup>nd</sup>

Moulded Dimensions: Length 370'-0" Breadth 49.74' Depth 27'-9"

Moulded displacement at moulded draught = 85 per cent. of moulded depth 10108 tons

Coefficient of fineness for use with Tables .815.

Depth for Freeboard (D)	Depth correction	Round of Beam correction
Moulded depth ... .. <u>27'-9"</u>	(a) Where D is greater than Table depth (D-Table depth) R = $(27'-9" - 24'-6") 2'-8\frac{1}{2}"$	Moulded Breadth (B) <u>49.74'</u>
Stringer plate ... .. <u>0.50"</u>	$= + 8.91"$	Standard Round of Beam = $\frac{B \times 12}{50} = 11.94"$
Sheathing on exposed deck $\frac{1}{4} \left( \frac{L-S}{L} \right) =$ <u>✓</u>	(b) Where D is less than Table depth (if allowed) (Table depth-D) R = <u>✓</u>	Ship's Round of Beam = <u>12"</u>
Depth for Freeboard (D) = <u>27'-80</u>	If restricted by superstructures <u>✓</u>	Difference <u>.06" excess</u>
		Restricted to
		Correction = $\frac{\text{Diff}^e}{4} \times \left( 1 - \frac{S_1}{L} \right) = \frac{.06}{4} \times .5689 = -.01$

## DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S <sub>1</sub> )	Height	Height Correction	Effective Length (E)
Poop enclosed ... ..	<u>25.92</u>	<u>25.92</u>	<u>7'-3"</u>	<u>✓</u>	<u>25.92</u>
" overhang ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
R.Q.D. enclosed ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
" overhang ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
Bridge enclosed ... ..	<u>100'-0"</u>	<u>100.00</u>	<u>7'-3"</u>	<u>✓</u>	<u>100.00</u>
" overhang aft ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
" overhang forward <u>32.83</u>	<u>32.83</u>	<u>32.83</u>	<u>✓</u>	<u>✓</u>	<u>32.83</u>
F'cle enclosed <u>33.58</u>	<u>33.58</u>	<u>33.58</u>	<u>7'-0"</u>	<u>✓</u>	<u>33.58</u>
" overhang ... ..	<u>9.75</u>	<u>9.75</u>	<u>✓</u>	<u>✓</u>	<u>9.75</u>
Trunk aft ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
" forward ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
Tonnage opening aft ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
" forward ... ..	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>
Total ... ..	<u>159.50</u>	<u>159.50</u>	<u>✓</u>	<u>✓</u>	<u>159.50</u>

Standard Height of Superstructure 7'-20" ✓" " R.Q.D. ✓Deduction for complete superstructure 40.00" ✓Percentage covered  $\frac{S}{L} = 43.11\%$  ✓"  $\frac{S_1}{L} = 43.11\%$  ✓"  $\frac{E}{L} = 43.11\%$  ✓Percentage from Table, Line A. ✓  
(corrected for absence of forecastle (if required))Percentage from Table, Line B. 30.14 ✓  
(corrected for absence of forecastle (if required))

Interpolation for bridge less than 2L (if required)

Deduction =  $40 \times .3014 = -12.06"$  ✓

## SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
A.P. ... ..	<u>47.00</u>	<u>1</u>	<u>✓</u>	<u>47.00</u>	<u>44.00</u>	<u>44.00</u>	<u>1</u>	<u>✓</u>	<u>44.00</u>
$\frac{1}{6}$ L from A.P. ... ..	<u>20.91</u>	<u>4</u>	<u>✓</u>	<u>83.64</u>	<u>18.17</u>	<u>18.17</u>	<u>4</u>	<u>✓</u>	<u>72.68</u>
$\frac{2}{6}$ L " ... ..	<u>5.17</u>	<u>2</u>	<u>✓</u>	<u>10.34</u>	<u>4.54</u>	<u>4.54</u>	<u>2</u>	<u>✓</u>	<u>9.08</u>
Amidships ... ..	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>✓</u>	<u>4</u>	<u>✓</u>	<u>✓</u>
$\frac{2}{6}$ L from F.P. ... ..	<u>10.34</u>	<u>2</u>	<u>✓</u>	<u>20.68</u>	<u>10.81</u>	<u>10.81</u>	<u>2</u>	<u>✓</u>	<u>21.62</u>
$\frac{1}{6}$ L " ... ..	<u>41.82</u>	<u>4</u>	<u>✓</u>	<u>167.28</u>	<u>43.25</u>	<u>43.25</u>	<u>4</u>	<u>✓</u>	<u>173.00</u>
F.P. ... ..	<u>94.00</u>	<u>1</u>	<u>✓</u>	<u>94.00</u>	<u>96.00</u>	<u>96.00</u>	<u>1</u>	<u>✓</u>	<u>96.00</u>
Total ... ..	<u>423</u>			<u>422.94</u>					<u>416.38</u>

Mean actual sheer aft = Deficient > 75% standardMean actual sheer forward = ExcessLength of enclosed superstructure forward of amidships = } Deficient  
" " aft of " = } sheerCorrection =  $\frac{\text{Difference between sums of products}}{18} \left( \frac{75-S}{2L} \right) = \frac{6.56}{18} \left( \frac{.75 - .215}{.535} \right) = +.19"$  ✓

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 = 27.80

Summer freeboard = 5.48

Moulded draught (d) = 22.32

Deduction for Tropical freeboard and addition for Winter freeboard =  $\frac{d}{4}$  inches = 5.58

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

=

## TABULAR FREEBOARD corrected for Flush Deck (if required)

Correction for coefficient  $\frac{.815 + .65}{1.36} = \frac{1.465}{1.36}$ 

	+	-
Depth Correction ... ..	<u>8.91</u>	<u>✓</u>
Deduction for superstructures ... ..	<u>-</u>	<u>12.06</u>
Sheer correction ... ..	<u>.19</u>	<u>✓</u>
Round of Beam correction ... ..	<u>-</u>	<u>.01</u>
Correction for Thickness of Deck amidships ... ..	<u>-</u>	<u>✓</u>
Other corrections, scantlings, etc. ... ..	<u>-</u>	<u>✓</u>
	<u>9.10</u>	<u>12.07</u>

Summer Freeboard = 65.63SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, ~~Wood~~ Steel, Deck:—

Tropical Fresh Water Line above Centre of Disc ...	<u>10" = 254</u>	Tropical Fresh Water Freeboard ...	<u>4'-7" = 1397</u>
Fresh Water Line " " ...	<u>5 1/2" = 140</u>	Fresh Water " " ...	<u>4'-11 1/2" = 1511</u>
Tropical Line " " ...	<u>4 1/2" = 114</u>	Tropical " " ...	<u>5'-0 1/2" = 1537</u>
Winter Line below " " ...	<u>4 1/2" = 114</u>	Winter " " ...	<u>5'-9 1/2" = 1765</u>
Winter North Atlantic Line " " ...	<u>✓</u>	Winter North Atlantic " " ...	<u>✓</u>

W478-0116(112)

MARKING FORM

RECEIVED -7 MAR 1935



# PARTICULARS OF PROTECTION TO OPENINGS, ETC.

HATCHWAYS ON FREEBOARD AND SUPERSTRUCTURE DECKS									
FREEBOARD DECK					BRIDGE DECK				
Description of Hatchway	Nº1	Nº2	Nº3	Nº4	Nº5	Nº6	Nº7	Nº8	Nº9
Dimensions of Hatchway	22'4"	20'8"	15'10"	29'10"	24'9"	15'11"	10'4"	15'11"	10'4"
COAMINGS	Height above Deck	3'10"	3'3"	1'5"	3'3"	3'3"	2'3"	3'3"	2'3"
	Thickness	4"	4"	3"	5"	5"	5"	5"	5"
	Stiffeners	4"	4"	3"	5"	5"	5"	5"	5"
	Brackets, Stays	✓	✓	✓	✓	✓	✓	✓	✓
HATCH BEAMS	Number	2	2	2	2	2	2	2	2
	Spacing	7'6"	9'0"	7'6"	9'9"	8'5"	7'6"	9'9"	8'5"
	Scantling and Sketch	4" x 5"	3" x 5"	3" x 5"	3" x 5"	3" x 5"	3" x 5"	3" x 5"	3" x 5"
	Bearing Surface	43x3x3/8	43x3x3/8	43x3x3/8	43x3x3/8	43x3x3/8	43x3x3/8	43x3x3/8	43x3x3/8
FORE AND AFTERS	Number	3	3	3	3	3	3	3	3
	Spacing	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"	4'0"
	Unsupported Lengths	7'1"	9'3"	10'0"	9'4"	7'9"	8'7"	9'4"	8'7"
	Scantling and Sketch	8x9x1/2	8x9x1/2	12x8	7x7x3/4	8x7x1/2	6x6x1/2	8x7x1/2	6x6x1/2
HATCH COVERS	Material	pine	pine	pine	pine	pine	pine	pine	pine
	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"
	How fitted	2/8	2/8	2/8	2/8	2/8	2/8	2/8	2/8
	Bearing Surface	24x6	24x6	24x6	24x6	24x6	24x6	24x6	24x6
Spacing of Cleats	24x6	24x6	24x6	24x6	24x6	24x6	24x6	24x6	24x6
Number of Tarpaulins	2	2	2	2	2	2	2	2	2

Particulars of fiddle, funnel and ventilator coamings:—  
 Stanchion gratings covered by strong steel hinged covers.  
 Fiddle and funnel ventilators in efficient condition.  
 Engine skylight of steel strongly constructed.

Particulars of Flush Bunker Scuttles:— none

Particulars of Companionways:— none

Particulars of Ventilators in exposed positions on freeboard and superstructure decks:—  
 On freeboard deck 4 ventilators of 18" height 3'0" x 3/8" thick. All ventilators constructed in accordance with the Rules and coverings closed with wood plugs and canvas covers.  
 On superstructure decks 3 ventilators of 18" height 2'0" x 1/4".  
 Particulars of Air Pipes in exposed positions on freeboard, raised quarter, or superstructure decks:—  
 On freeboard deck 2 airpipes flush with deck closed by brass screw plugs.  
 On raised quarter deck 2 airpipes 13" high closed by canvas covers.  
 On poop deck 1 airpipe flush with deck closed by brass screw plug.  
 On superstructure deck 2 airpipes 10" closed by wood plugs and canvas covers.

Particulars of Gangway Cargo and Coaling Ports:— none fitted

Particulars of Scuppers and Sanitary Discharge Pipes — sanitary discharge pipes fitted with storm valves for position see sketch (x)

Particulars of Side Scuttles: Side scuttles to crew spaces in forecabin and poop provided with hinged steel lights.  
 All scuttles of substantial construction.

Particulars of Guard Rails:—  
 Bulwark on freeboard deck in wells 3'11" distance of stanchions 4'10" till 6'5" stanchions 7' x 3/8" rail profile 2 1/2" x 3" x 3/8".  
 On forecabin deck guardrail 2 rods height 3'0" stanchions 4'6" apart.  
 On bridge and poop deck guardrail 2 rods height 3'0" stanchions 4'3" apart.

Particulars of Gangways, Lifelines, etc.:—  
 In both wells on each side of hatchways lifelines fitted.

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	115' 6"	3' 11"	2' 10" x 1' 6"	5	21.20	23.10
Forward Well	88' 0"	3' 11"	3' 2" x 1' 0"	4	16.00	17.92

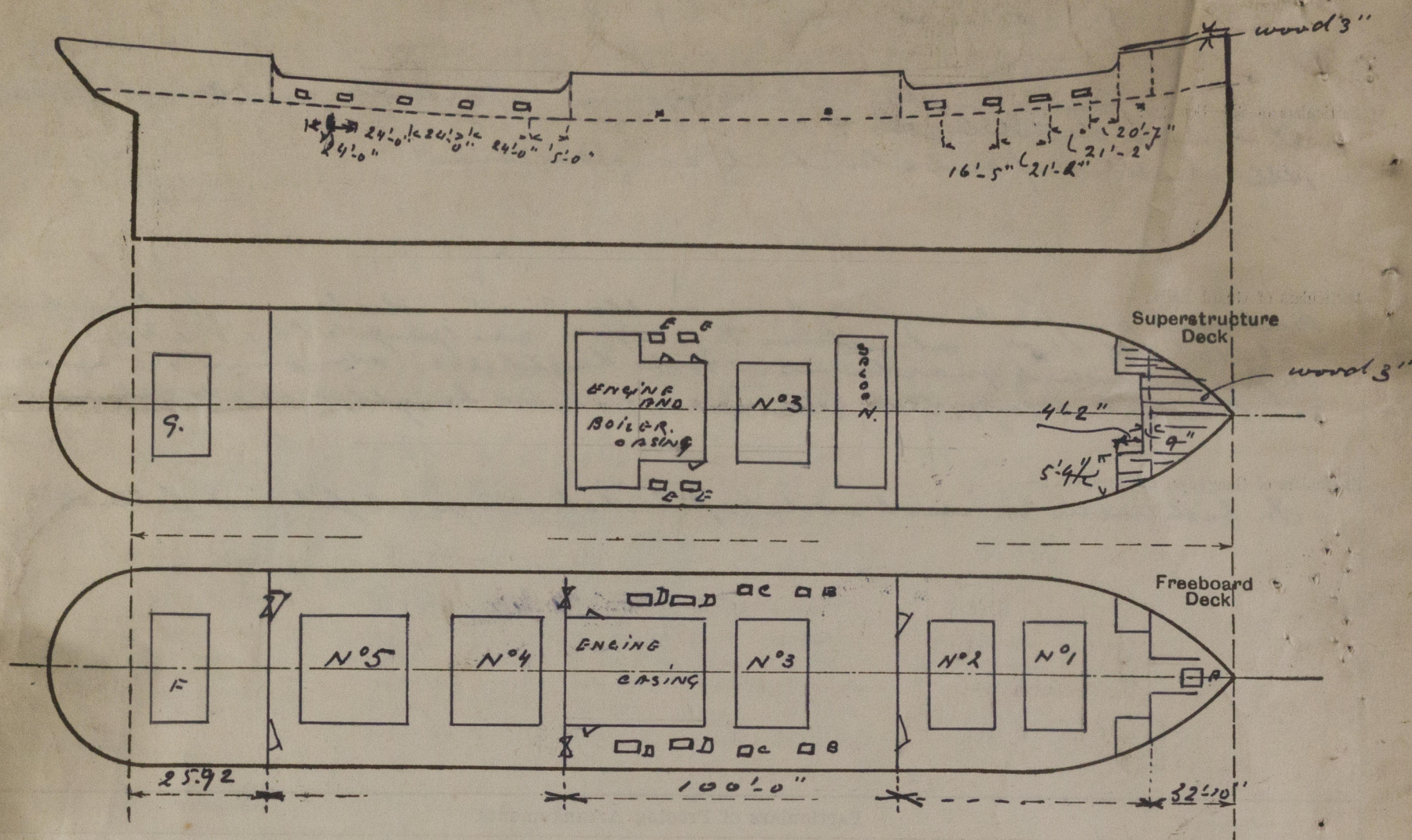
State position of each freeing port (F. and A. position and height above deck edge) } After Well:— } see sketch  
 } Forward Well:— }  
 State whether the freeing ports are fitted with shutters, bars, or rails, and give particulars of such: all freeing ports with shutters hinged on one side.  
 Additional area where sheer is less than standard. Sheer above deck edge 14"

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	✓	0.40	flanges 7" x 6" x 3/4" x 3/8"	3' 0"	✓	3' 3" x 6' 7"	3 1/2"	7' 3"
Raised Quarter Deck Bulkhead	✓	✓	✓	✓	✓	5' 10" x 4' 4"	2' 6"	7' 3"
Bridge, After Bulkhead	✓	5/16"	flanges 4" x 4" x 3/4" x 3/8"	1' 0"	no	3' 0" x 5' 1 1/2"	17"	7' 3"
Bridge, Forward Bulkhead	✓	40"	2 1/2" x 3 1/2" x 3/8"	3' 0"	top & bottom brackets	4' 1" x 6' 10"	✓	7' 0"
Forecastle Bulkhead	✓	24	2 1/2" x 3 1/2" x 3/8"	3' 0"	✓	✓	✓	✓
Trunk, Aft	✓	✓	✓	✓	✓	✓	✓	✓
Trunk, Forward	✓	✓	✓	✓	✓	✓	✓	✓
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	2' 11" x 40"	24	4 3/4" x 3 1/2" x 3/8"	3' 10"	top brackets	4' 0" x 2' 2"	10 1/2"	7' 0"
Exposed Machinery Casings on Superstructure Decks	✓	✓	✓	✓	✓	✓	✓	✓
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	33" x 1/16"	5/16"	4 3/4" x 3 1/2" x 3/8"	4' 2"	none	4' 2" x 22"	10"	7' 3"
Deckhouses on Flush Deck Ships	✓	✓	✓	✓	✓	✓	✓	✓

Particulars of Closing Appliances (state if capable of being manipulated from both sides).	
Poop Bulkhead	on P.S. 3" wood chipping boards in channel riveted bars at full height and with steel hinged door / S.B. wood panelled door permanently closed.
Raised Quarter Deck Bulkhead	✓
Bridge, After Bulkhead	2 1/2" wood chipping boards in channel riveted bars at full height on the middle of the opening supported by 4 bar 4 x 6 x 1/16" attached with lugs at bridge deck and foreward deck.
Bridge, Forward Bulkhead	steel hinged doors closed by bolts through bulkhead with chain.
Forecastle Bulkhead	open
Exposed Machinery Casings on Freeboard or Raised Quarter Decks	✓
Exposed Machinery Casings on Superstructure Decks	steel hinged doors manipulated from both sides
Machinery Casings within Superstructures not fitted with Class I Closing Appliances	steel hinged doors manipulated from both sides
Deckhouses on Flush Deck Ships	✓



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	42'0" x 3'-2"	Height of coaming	1'-7" x .40	wood hatches	2 1/2" rest 1 3/8 cleats 2 1/4 x 6" 2 tapered
" B "	24" x 24"	"	" R 9 x 3 1/2 x .50	wood hatches	2 1/2" rest 2 1/2" cleats 2 1/4 x 6" "
" C "	20" x 30"	"	" R 9 x 3 1/2 x .50	"	2 1/2" rest 2 1/2" " " " "
" D "	6'-6" x 3'-0"	"	" R 9 x 3 1/2 x .50	"	2 1/2" rest 2 1/2" " " " "
" E "	6'-4" x 3'-5"	"	" 1'-3" x .38	"	2 3/8 " 2" " " " "
" F "	5'-11" x 8'-0"	"	" 1'-3" x .40	"	2 3/8 " 1 3/4 " " " "
" G "	5'-11" x 8'-3"	"	" 1'-0" x .40	"	2 3/4 " 1 3/4 " " " "

Measurements for this report has been taken whilst vessel was placed in dry dock for condition.  
 This vessel has left for Antwerp, where the vessel will be loaded within 6 days.  
 It is requested by the owners superintendent to forwarded particulars of assignment as soon as possible to the Antwerp surveyors.

Builder's name and yard number: *Sunderland Shipbuilding Co. Ltd. Sunderland.*

Names of sister ships

Owners: *A. Pusi*

For £ *100,000* with Received by me *A. H. Wehrmeyer*



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Foundation