

## REPORT ON MACHINERY.

No. 8064.b.

Date of writing Report 28 June 1920 When handed in at Local Office

Received at London Office

FRI. JUL 2 1920

No. in Survey held at Delfzijl

Port of Amsterdam

Date, First Survey 31 July 1919 Last Survey 15 May 1920

Reg. Book.

on the Steel Screw Steamer Aspasia

(Number of Visits 19.)

Master G. Tsatsaronis Built at Delfzijl

By whom built Firma Joh. Berg

Tons { Gross 605.  
Net 365.  
When built 1920

Engines made at Delfzijl

By whom made Firma Joh. Berg

when made 1920.

Boilers made at Delfzijl

By whom made Firma Joh. Berg

when made 1920.

Registered Horse Power

Owners N. Logothetopoulos &amp; Spiropoulos

Port belonging to Nauplion

Nom. Horse Power as per Section 28 70.7 71

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &amp;c.—Description of Engines Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders  $12\frac{1}{2} \times 19\frac{1}{2} \times 31\frac{1}{2}$  Length of Stroke  $21\frac{1}{2}$  Revs. per minute 130Dia. of Screw shaft as per rule  $182\frac{1}{2}$  Material of screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush  $750\frac{1}{2}$ Dia. of Tunnel shaft as per rule  $156\frac{1}{2}$  Dia. of Crank shaft journals as per rule  $165\frac{1}{2}$ Dia. of Crank pin  $168\frac{1}{2}$  Size of Crank webs  $320 \times 100\frac{1}{2}$  Dia. of thrust shaft undercollars  $165\frac{1}{2}$  Dia. of screw  $2500\frac{1}{2}$  Pitch of Screw  $2900\frac{1}{2}$ 

No. of Blades 4

State whether moveable No

Total surface  $3\frac{1}{2} m^2$ No. of Feed pumps One Diameter of ditto  $65\frac{1}{2}$  Stroke  $300\frac{1}{2}$ 

Can one be overhauled while the other is at work

EHP 46

No. of Bilge pumps One Diameter of ditto  $65\frac{1}{2}$  Stroke  $300\frac{1}{2}$ 

Can one be overhauled while the other is at work

No. of Donkey Engines two

Sizes of Pumps  $5\frac{1}{4} \times 4\frac{1}{4} \times 5$ 

Duplex

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room three  $80\frac{1}{2}$ In Holds, &c. forward four  $80\frac{1}{2}$  afterhold four  $80\frac{1}{2}$ No. of Bilge Injections One sizes  $90\frac{1}{2}$  Connected to condenser or to circulating pumpIs a separate Donkey Suction fitted in Engine room & size  $80\frac{1}{2}$ 

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line Above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from Engine room top platform

BOILERS, &amp;c.—(Letter for record S.)

Manufacturers of Steel Mannesmann Röhren Werke

Total Heating Surface of Boilers  $1368\frac{1}{2}$  Is Forced Draft fitted

No. and Description of Boilers One Single Ended.

Working Pressure  $13\frac{1}{2} kg$ Tested by hydraulic pressure to  $370\frac{1}{2}$ 

Date of test 27.2.20 No. of Certificate 280

Can each boiler be worked separately

Area of fire grate in each boiler  $4\frac{1}{2} m^2$  No. and Description of Safety Valves toeach boiler two direct Spring Area of each valve  $182\frac{1}{2}$ Pressure to which they are adjusted  $185\frac{1}{2}$  Are they fitted with easing gearSmallest distance between boilers or uptakes and bunkers or woodwork  $290\frac{1}{2}$ Mean dia. of boilers  $360\frac{1}{2}$  Length  $3222\frac{1}{2}$  Material of shell platesThickness  $27\frac{1}{2}$  Range of tensile strength 18 to 30 tons

Are the shell plates welded or flanged plain

Are the seams double strap

Descrip. of riveting: cir. seams double

Diameter of rivet holes in long. seams  $27\frac{1}{2}$ Pitch of rivets  $140\frac{1}{2}$ Lap of plates or width of butt straps  $405\frac{1}{2}$ 

Percentages of strength of longitudinal joint

Working pressure of shell by rules  $13.56\frac{1}{2} kg$  Size of manhole in shell  $300 \times 400\frac{1}{2}$ Size of compensating ring  $200 \times 24\frac{1}{2}$ 

No. and Description of Furnaces in each boiler two Morrison

Material Steel Outside diameter  $1200\frac{1}{2}$ 

Length of plain part

Thickness of plates

Description of longitudinal joint welded

No. of strengthening rings

Working pressure of furnace by the rules  $13.9\frac{1}{2} kg$ Combustion chamber plates: Material Steel Thickness: Sides  $18\frac{1}{2}$  Back  $10\frac{1}{2}$  Top  $14\frac{1}{2}$  Bottom  $18\frac{1}{2}$ Pitch of stays to ditto: Sides  $200\frac{1}{2}$ Back  $190 \times 185$  Top  $200 \times 215$  If stays are fitted with nuts or riveted heads

Material of stays steel

Area at smallest part  $1134\frac{1}{2}$  Area supported by each stay  $36100\frac{1}{2}$  Working pressure by rules  $17.6\frac{1}{2} kg$  End plates in steam space:Material Steel Thickness  $26\frac{1}{2}$ Pitch of stays  $460 \times 380$  How are stays securedArea at smallest part  $3959$ Area supported by each stay  $1480\frac{1}{2}$  Working pressure by rules  $16.5\frac{1}{2} kg$  Material of Front plates at bottomThickness  $26\frac{1}{2}$  Material of Lower back plateThickness  $26\frac{1}{2}$  Greatest pitch of stays  $335 \times 355$  Working pressure of plate by rules  $20\frac{1}{2} kg$ Diameter of tubes  $89\frac{1}{2}$ Pitch of tubes  $115$  Material of tube plates Steel Thickness: Front  $26\frac{1}{2}$  Back  $21\frac{1}{2}$  Mean pitch of stays  $230 \times 230\frac{1}{2}$ Pitch across wide water spaces  $360\frac{1}{2}$ Working pressures by rules  $22.2$  Girders to Chamber tops: Material Steel Depth andThickness of girder at centre  $175\frac{1}{2}$ Length as per rule  $640\frac{1}{2}$  Distance apart  $215\frac{1}{2}$  Number and pitch of stays in eachWorking pressure by rules  $13.9\frac{1}{2}$  Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two connecting rod top & bottom endbolts & nuts, two main bearing bolts & nuts, One set of coupling bolts, One set of feed & bilge pumps, valves, One set of piston rings, One propeller, A quantity of bolts & nuts assorted, and Iron of various sizes.*

The foregoing is a correct description,

*Johndberg*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919. July 31, Aug 15, Sept 14, Oct 16, November 5, December 10 & 23.  
During erection on board vessel -- 1920 Jan 13 & 19, Feb 12, 18, 23 & 27, March 19, April 8, 14 & 30, May 7 & 15  
Total No. of visits 19.

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders  $\frac{15}{8}$   $\frac{14}{9}$   $\frac{16}{10}$  Slides  $\frac{16}{10}$   $\frac{5}{11}$   $\frac{23}{12}$  Covers  $\frac{23}{12}$   $\frac{13}{13}$  Pistons  $\frac{23}{12}$   $\frac{13}{13}$  Rods  $\frac{23}{12}$   $\frac{13}{13}$   $\frac{12}{2}$   
Connecting rods  $\frac{13}{1}$   $\frac{12}{2}$  Crank shaft  $\frac{23}{2}$   $\frac{19}{3}$   $\frac{8}{4}$  Thrust shaft  $\frac{23}{2}$   $\frac{19}{3}$   $\frac{8}{4}$  Tunnel shafts  $\frac{23}{2}$   $\frac{19}{3}$   $\frac{8}{4}$  Screw shaft  $\frac{23}{2}$   $\frac{19}{3}$   $\frac{8}{4}$  Propeller  $\frac{23}{2}$   $\frac{19}{3}$   $\frac{8}{4}$   
Stern tube  $\frac{23}{2}$   $\frac{19}{3}$  Steam pipes tested  $\frac{4}{5}$  Engine and boiler seatings  $\frac{19}{3}$  Engines holding down bolts  $\frac{8}{4}$   
Completion of pumping arrangements  $\frac{4}{5}$  Boilers fixed  $\frac{14}{4}$  Engines tried under steam 15 May  
Completion of fitting sea connections 27 Feb. Stern tube 23 Feb. Screw shaft and propeller 27 Feb.  
Main boiler safety valves adjusted 15 May. Thickness of adjusting washers SB 10½ PS 9½

Material of Crank shaft *SM Ann* Identification Mark on Do. *LLOYDS* Material of Thrust shaft *SM Ann* Identification Mark on Do. *LLOYDS*  
Material of Tunnel shafts *SM Ann* Identification Marks on Do. *LLOYDS* Material of Screw shafts *SM Ann* Identification Marks on Do. *LLOYDS*  
Material of Steam Pipes *Steel* Test pressure 555 lbs per sq inch

Is an installation fitted for burning oil fuel *✓*

Is the flash point of the oil to be used over 150°F. *✓*

Have the requirements of Section 49 of the Rules been complied with *✓*

Is this machinery duplicate of a previous case *✓* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel's machinery & Boiler*)

*have been constructed in accordance with the Society's rules and approved plans which are herewith returned to London Office. The material used is of good ductile quality and duly tested as required. All castings are sound and cylinders & Condenser tested under hydraulic pressure with satisfactory results.*

*Boiler tested to twice working pressure proved to be tight and no setting whatever. Machinery tried during an 8 hours run found working most satisfactory. On account of a miscalculation of the Constructors in computing the M.H.P. there is only one feed and one bilge pump fitted and in order to compensate for this omission a 2½" Steam Ejector has been fitted which can be used for feeding & bilge pump purposes.*

*I am of opinion that this vessel is eligible to be recorded in the Society's Register Book* *It is submitted that this vessel is eligible for THE RECORD + LMC 5.20.*

The amount of Entry Fee ... *£ 12. -* : When applied for, *June 1920*  
Special ... *£ 126. -* :  
Donkey Boiler Fee ... *£* :  
Travelling Expenses (if any) *£ 190.45* : When received, *June 1920*

Committee's Minute *FRI JUL 23 1920*

Assigned *LMC 5.20*

MACHINERY CERT.  
WRITTEN



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