

REPORT ON MACHINERY.

No. 8067.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 Reg. Book.

Delfzijl

Port of Amsterdam

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

(Number of Visits 19.)

on the Steel Screw Steamer *Aspasia*

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 & 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, &c.—Description of Engines

Tripole 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 $5\frac{1}{2}$ Revs. per minute 130

Dia. of Screw shaft as per rule 182 Dia. of thrust shaft under collars 186 Material of screw shaft *d.m steel*

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

the propeller boss 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

Dia. of Tunnel shaft as per rule 156 as fitted 161

Dia. of Crank shaft journals as per rule 165 as fitted 168

Dia. of Crank pin 168

Size of Crank webs 320×100

No. of Feed pumps One

Diameter of ditto 65 Stroke 300

Can one be overhauled while the other is at work

Total surface 5 m²

No. of Bilge pumps One Diameter of ditto 65 Stroke 300

Can one be overhauled while the other is at work

No. of Donkey Engines two Sizes of Pumps $5\frac{1}{2} \times 4\frac{1}{4} \times 5$ $4\frac{1}{2} \times 2\frac{3}{4} \times 4$

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

In Engine Room three 80

In Holds, &c. forward four 80 afterhold four 80

No. of Bilge Injections One sizes 90

Connected to condenser or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

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

Are they Valves or Cocks

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

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, &c.—(Letter for record S.)

Manufacturers of Steel *Wannismann Röhren Werke*

Total Heating Surface of Boilers 1368.46

Is Forced Draft fitted No. and Description of Boilers *One single ended.*

Working Pressure 13 kg Tested by hydraulic pressure to 370 lbs 16 kg

Date of test 27-2-20 No. of Certificate 280

Can each boiler be worked separately

Area of fire grate in each boiler 4 m^2 or 43 sq ft

No. and Description of Safety Valves to each boiler *two direct spring*

Smallest distance between boilers or uptakes and bunkers or woodwork 290

Mean dia. of boilers 360.5 Length 3222 Material of shell plates *steel*

Thickness $2\frac{1}{2}$ Range of tensile strength 18 to 30 tons

Are the shell plates welded or flanged *plain* Descrip. of riveting: cir. seams *double riv*

ong. seams *double strap* Diameter of rivet holes in long. seams 27

Pitch of rivets 170 Lap of plates or width of butt straps 405

Per centages of strength of longitudinal joint rivets 84 plate 90

Working pressure of shell by rules 13.56 kg Size of manhole in shell 300×400

Size of compensating ring 200×245

No. and Description of Furnaces in each boiler *two Morrison* Material *steel* Outside diameter 1200

Length of plain part top

Thickness of plates crown 15 bottom 15

Description of longitudinal joint *Welded* No. of strengthening rings

Working pressure of furnace by the rules 13.9 kg

Combustion chamber plates: Material *steel* Thickness: Sides 18 Back 20 Top 14 Bottom 18

Pitch of stays to ditto: Sides 200 Back 190 x 185 Top 100 x 115

If stays are fitted with nuts or riveted heads Working pressure by rules 14.58 kg

Material of stays *steel* Area at smallest part 1134.1

Area supported by each stay 36100 Working pressure by rules 17.6 lbs End plates in steam space:

Material *steel* Thickness 26 Pitch of stays 460 x 580

How are stays secured *secured & riveted with riv washers* Working pressure by rules 14 kg Material of stays *steel*

Area at smallest part 3959

Area supported by each stay 14480 Working pressure by rules 16.5 kg Material of Front plates at bottom *steel*

Thickness 26 Material of Lower back plate *steel*

Thickness 26 Greatest pitch of stays 335 x 555 Working pressure of plate by rules 20 kg

Diameter of tubes 89 Pitch of tubes 115

Material of tube plates *steel* Thickness: Front 26 Back 21 Mean pitch of stays 230 x 230

Pitch across wide water spaces 360

Working pressures by rules 22.2 & 21.2 Girders to Chamber tops: Material *steel* Depth and

Thickness of girder at centre 175

Length as per rule 640 Distance apart 215 Number and pitch of stays in each *two 210*

Working pressure by rules 13.9 kg

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

19 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 ends bolts & 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 & 29, 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*

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

Dates of Examination of principal parts—Cylinders *15 14 16* Slides *16 5 23* Covers *23 12* Pistons *23 13* Rods *23 13 12*
Connecting rods *13 12* Crank shaft *23 19 8* Thrust shaft *23 19 8* Tunnel shafts *23 19 8* Screw shaft *29 12 & 23 & 27* Propeller *29 23 & 27*
Stern tube *23 27* Steam pipes tested *4 5* Engine and boiler seatings *19 5* Engines holding down bolts *8 4*
Completion of pumping arrangements *4 5* Boilers fixed *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 10 1/2 PS 9 2/3*

Material of Crank shaft *SM Ann Ingot Steel* Identification Mark on Do. *LLOYDS No. 223 J.B.S. 8.4.20* Material of Thrust shaft *SM Ann Ingot Steel* Identification Mark on Do. *LLOYDS No. 224 J.B.S. 8.4.20*
Material of Tunnel shafts *SM Ann Ingot Steel* Identification Marks on Do. *LLOYDS No. 226. 7-8* Material of Screw shafts *SM Ann Ingot Steel* Identification Marks on Do. *LLOYDS No. 229 J.B.S. 8.4.20*
Material of Steam Pipes *Steel* Test pressure *5.5 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 2 1/2" 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 **LMC 6-1920** *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 *MACHINERY CERT. + LMC 5.20*

J. M. Blue *J. M. Blue*
Engineer Surveyor to Lloyd's Register of Shipping.

Certificate (if required) to be sent to Surveyors, Australia

