

# REPORT ON MACHINERY.

No. 4944

Port of Genoa

Received at London Office WED. 21 JUN 1911

No. in Survey held at Zurich

Date, first Survey Nov 17<sup>th</sup> 1910 Last Survey Jan 27<sup>th</sup> 1911

eg. Book.

(Number of Visits) 28 June 16<sup>th</sup> 1911 Regensburg

on the Screw Steamer "No 10"

Gross 120

aster Built at Regensburg

By whom built Christof Rutzof

Net

When built 1911

Engines made at Zurich

By whom made Aktiengesellschaft der Maschinenfabriken Bocher Wyss & Co

when made 1911

Boilers made at so

By whom made so

when made 1911

Registered Horse Power

Owners The Golden Horn Steam Nav Co

Port belonging to Constantinople

nom. Horse Power as per Section 28 27

Is Refrigerating Machinery fitted for cargo purposes -

Is Electric Light fitted -

## ENGINES, &c.—Description of Engines

Compound

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 11.02" x 18.9"

Length of Stroke 11.8"

Revs. per minute 240

Dia. of Screw shaft 4.4"

as per rule 4.4"

Material of steel

screw shaft)

the screw shaft fitted with a continuous liner the whole length of the stern tube no

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 Yes with Gutta Percha

Length of stern bush 19.68

Dia. of Tunnel shaft 4.1"

as per rule 4.1"

as fitted 4.1"

Dia. of Crank shaft journals 4.4"

as per rule 4.4"

as fitted 4.4"

Dia. of Crank pin 4.4"

Size of Crank webs 5.2" x 2.2"

Dia. of thrust shaft under

bars 4.4"

Dia. of screw 4.4"

Pitch of Screw 5.4"

No. of Blades 4

State whether moveable no

Total surface 5.49

No. of Feed pumps one

Diameter of ditto 2.16"

Stroke 4"

Can one be overhauled while the other is at work -

No. of Bilge pumps one

Diameter of ditto 2.16"

Stroke 4"

Can one be overhauled while the other is at work -

No. of Donkey Engines one

Sizes of Pumps 3" x 2" x 3"

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

Engine Room one 2"

In Holds, &c. Fore hold one 2" after hold

one 2" lock on after peak 1 9/16"

No. of Bilge Injections one

sizes 2 3/4"

Connected to condenser, or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size Yes 2"

Are all the bilge suction pipes fitted with roses Yes

Are the roses in Engine room always accessible Yes

Are the sluices on Engine room bulkheads always accessible None

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

Are they Valves or Cocks Cocks

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

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 Yes

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

How are they protected -

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

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

Dates of examination of completion of fitting of Sea Connections 5/4/11

of Stern Tube 5/4/11

Screw shaft and Propeller 5/4/11

Is the Screw Shaft Tunnel watertight None

Is it fitted with a watertight door Yes

worked from -

## BOILERS, &c.—(Letter for record S)

Manufacturers of Steel Physsen & Co. Buseldorfer Pohnen & Eisenwalzwerk

Total Heating Surface of Boilers 650 sq ft

Is Forced Draft fitted no

No. and Description of Boilers One horizontal multitubular

Working Pressure 150

Tested by hydraulic pressure to 300 lbs

Date of test 24.1.11

No. of Certificate 93

Can each boiler be worked separately -

Area of fire grate in each boiler 20.1 sq ft

No. and Description of Safety Valves to each boiler 2 Spring

Area of each valve 5.1 sq in

Pressure to which they are adjusted 150 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5 1/2"

Mean dia. of boilers 80.7"

Length 10.25"

Material of shell plates steel

Thickness 5/8"

Range of tensile strength 25.4

Are the shell plates welded or flanged no

Description of riveting: cir. seams double

Long. seams double butt Swedish iron

Diameter of rivet holes in long. seams 5/8"

Pitch of rivets 2.875 x 5.8"

Lap of plates or width of butt straps 9.21 x 13.78"

Percentage of strength of longitudinal joint 87.1

Working pressure of shell by rules 161

Size of manhole in shell 16 1/2" x 12 1/2"

Size of compensating ring 5.03 x .487"

No. and Description of Furnaces in each boiler One corrugated

Material steel

Outside diameter 37.4"

Length of plain part 6.8"

Thickness of plates 4.7"

Description of longitudinal joint Welded

No. of strengthening rings 9

Working pressure of furnace by the rules 170.5

Combustion chamber plates: Material steel

Thickness: Sides 1/2"

Back 1/2"

Top 1/2"

Bottom 1/2"

Pitch of stays to ditto: Sides 6" x 6"

Back 6" x 6"

Top 6" x 6"

If stays are fitted with nuts or riveted heads R. Heads

Working pressure by rules 177.5

Material of stays steel

Diameter at smallest part 1 1/8"

Area supported by each stay 36 sq in

Working pressure by rules 192

End plates in steam space: Yes

Material steel

Thickness 3/32"

Pitch of stays 17.5 x 8"

How are stays secured double nuts

Working pressure by rules 150

Material of stays steel

Diameter at smallest part 2 1/4"

Area supported by each stay 180 sq in

Working pressure by rules 176.25

Material of Front plates at bottom steel

Thickness 3/32"

Material of Lower back plate steel

Thickness 3/32"

Greatest pitch of stays 6" x 6"

Working pressure of plate by rules 250

Diameter of tubes 2 3/4"

Pitch of tubes 3.58" x 3.38"

Material of tube plates steel

Thickness: Front 3/32"

Back 3/32"

Mean pitch of stays 9 3/8"

Pitch across wide water spaces None

Working pressures by rules 248

Girders to Chamber tops: Material steel

Depth and thickness of girder at centre 4.72" x 1.10"

Length as per rule 14.7"

Distance apart 6"

Number and pitch of stays in each 2-6"

Working pressure by rules 200

Superheater or Steam chest; how connected to boiler None

Can the superheater be shut off and the boiler worked separately no

Diameter 35.5"

Length 35.5"

Thickness of shell plates 15/32"

Material steel

Description of longitudinal joint welded

Diam. of rivet holes 15/32"

Pitch of rivets -

Working pressure of shell by rules 150

Diameter of flue -

Material of flue plates -

Thickness -

Stiffened with rings -

Distance between rings -

Working pressure by rules -

End plates: Thickness 1/2"

How stayed no stays

Working pressure of end plates 150

Area of safety valves to superheater -

Are they fitted with easing gear -

VERTICAL DONKEY BOILER—

Manufacturers of Steel

None

Form with fields for No., Description, Made at, By whom made, When made, Where fixed, Working pressure, Date of test, No. of Certificate, Fire grate area, Description of Safety Valves, etc.

SPARE GEAR. State the articles supplied:— 2 Connecting bottom end bolts & nuts. 2 Main bearing bolts & nuts. One set of coupling bolts & nuts each for the intermediate shafts & for the flywheel coupling. One set of feed & bilge pump valves. A quantity of assorted bolts & nuts of various sizes. There are no top end bolts or common piston springs in this engine.

The foregoing is a correct description,

Aktiengesellschaft der Maschinenfabriken ESCHER WYSS & COE

Handwritten signature of manufacturer

Dates of Survey while building, During progress of work in shops, During erection on board vessel, Total No. of visits

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders, Slides, Covers, Pistons, Rods, Connecting rods, Crank shaft, Thrust shaft, Tunnel shafts, Screw shaft, Propeller, Stern tube, Steam pipes tested, Engine and boiler seatings, Engines holding down bolts, Completion of pumping arrangements, Boilers fixed, Engines tried under steam, Main boiler safety valves adjusted, Thickness of adjusting washers, Material of Crank shaft, Identification Mark on Do., Material of Thrust shaft, Identification Mark on Do., Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts, Identification Marks on Do., Material of Steam Pipes, Test pressure

General Remarks (State quality of workmanship, opinions as to class, &c. This vessel's machinery has been examined during construction with a view to being classed +100A in the R. Book. The materials and workmanship are good & in accordance with the rules requirements & the approved amended plans. The boiler has been tested to a hydraulic pressure in accordance with the rules, & found tight & sound. It is marked... The engines were seen erected in the works of the makers, and are to be shipped to Regensburg, to be fitted on board, where the following remains to be done to entitle the machinery to be classed +100C with date - by: The engines & boilers to be seen fitted on board; the spare gear to be checked. The main steam pipe to be tested. The pipe arrangements to be verified with the plans. The engines to be seen running under steam, and the safety valves to be then adjusted to the working pressure of 150 lbs. Truste. Surveyors advised. The above noted requirements have been duly carried out to my satisfaction & the case is eligible in my opinion for the notation +100C. 6.11. P. Ritchie.

The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any)

When applied for, When received, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

TUE. 27 JUN 1911

Assigned

+ 2M 6.11

MACHINERY CERTIFICATE

