

REPORT ON MACHINERY.

WED. 19 APR 1911.

No. 4962

MON. 6 FEB 1911

Port of *Genoa*

Received at London Office

No. in Survey held at *Zurich*

Date, first Survey *Nov 14th 1910* Last Survey *Dec 2nd 1911*

eg. Book. *S. S. No. 6*

(Number of Visits *3*)

Master *Christof Puthof*

Tons } Gross *120 approx*
Net

Engines made at *Zurich* By whom made *Actengesellschaft der Maschinenfabriken Escher Wyss & Co*

When built *1911*

Boilers made at *Zurich* By whom made *ES*

when made *1911*

Registered Horse Power *24* Owners *The Golden Horn Steam Nav Co* Port belonging to *Constantinople*

nom. Horse Power as per Section 28 *24* Is Refrigerating Machinery fitted for cargo purposes *NO* Is Electric Light fitted *Yes*

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 *11.81* Revs. per minute *240* Dia. of Screw shaft as per rule *4.4* Material of screw shaft *steel*

Is 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. Gutter Packer sleeve* Length of stern bush *19.68*

Dia. of Tunnel shaft as per rule *4.19* Dia. of Crank shaft journals as per rule *4.4* Dia. of Crank pin *4.4* Size of Crank webs *5 1/2 x 2 1/2* Dia. of thrust shaft under

rollers *4.4* Dia. of screw *4.4* Pitch of Screw *55.9* 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 *1* Sizes of Pumps *3" in diameter* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *one 2"* In Holds, &c. *Fore hold one 2". After hold one 2"*

No. of Bilge Injections *one* sizes *2 1/8"* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *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 *Yes*

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*

What pipes are carried through the bunkers *None* 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 of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door *Yes* worked from

OILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Thyssen & Co. Busselanger Röhren Eisenwerk*

Total Heating Surface of Boilers *650 sq ft* Is Forced Draft fitted *Yes* No. and Description of Boilers *One horizontal Multitubular*

Working Pressure *150 lbs* Tested by hydraulic pressure to *300 lbs* Date of test *23.11.10* No. of Certificate *89*

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 Are they fitted with easing gear *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers *80.4* Length *110.25* Material of shell plates *steel*

Thickness *5/8* Range of tensile strength *25.4* Are the shell plates welded or flanged *Yes* Descrip. of riveting: cir. seams *double*

long. seams *double* Diameter of rivet holes in long. seams *5/8* Pitch of rivets *2 1/2 x 5 1/8* Lap of plates or width of butt straps *9.21 x 13.78*

Per centages of strength of longitudinal joint rivets *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 4.85* No. and Description of Furnaces in each boiler *One longitudinal* Material *steel* Outside diameter *37.4*

Length of plain part top *6.8* Thickness of plates crown *4.4* 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 *Yes* 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:

Material *steel* Thickness *3/32* Pitch of stays *17.5 x 8.5* How are stays secured *thin washers* 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 *1/8* 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*

Pitch across wide water spaces *None* Working pressures by rules *248 lbs* Girders to Chamber tops: Material *steel* Depth and

thickness of girder at centre *4.72 x 1.10* Length as per rule *17.41* 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* Material *steel* Description of longitudinal joint *welded* Diam. of rivet

holes *None* Pitch of rivets Working pressure of shell by rules *150* Diameter of flue *None* Material of flue plates Thickness

If 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

S.P. 401

Report No 4

VERTICAL DONKEY BOILER— Manufacturers of Steel

| | | | | |
|--------------------------------------|--|---------------------------|-------------------------------------|----------------------------------|
| No. | Description | | None | |
| Made at | By whom made | When made | Where fixed | |
| Working pressure | tested by hydraulic pressure to | Date of test | No. of Certificate | Fire grate area |
| Valves | No. of Safety Valves | Area of each | Pressure to which they are adjusted | Date of adjustment |
| If fitted with easing gear | If steam from main boilers can enter the donkey boiler | Dia. of donkey boiler | Length | |
| Material of shell plates | Thickness | Range of tensile strength | Descrip. of riveting long. seams | |
| Dia. of rivet holes | Whether punched or drilled | Pitch of rivets | Lap of plating | Per centage of strength of joint |
| Working pressure of shell by rules | Thickness of shell crown plates | Radius of do. | No. of stays to do. | Dia. of stays |
| Diameter of furnace Top | Bottom | Length of furnace | Thickness of furnace plates | Description of joint |
| Working pressure of furnace by rules | Thickness of furnace crown plates | Stayed by | | |
| Diameter of uptake | Thickness of uptake plates | Thickness of water tubes | Dates of survey | |

SPARE GEAR. State the articles supplied:— 2 Bottom end bolts & nuts. Top end bolts are not fitted in this engine. 2 Main bearing bolts & nuts. One set of coupling bolts & nuts for shaft, and for flywheel coupling. One set of feed and bilge pump valves. Two common piston springs are fitted in this engine. Assorted bolts and nuts, and iron of various sizes.

The foregoing is a correct description,

Aktiengesellschaft der Maschinenfabriken
ESCHER WYSS & CO

Manufacturer.

[Signature]

| | | |
|--------------------------------|----------------------------------|--------------------------|
| Dates of Survey while building | During progress of work in shops | 1910. Nov 14. 23. Dec 2. |
| | During erection on board vessel | |
| | Total No. of visits | 3. |

Is the approved plan of main boiler forwarded herewith Yes

| | | | | | | | | | | | |
|--|-----------|--------------------------------|------------------------------------|----------------------------|---------|-----------------------------|-----------|-------------|---------|-----------|---------|
| Dates of Examination of principal parts— | Cylinders | 14.23.2 | Slides | 17.23.2 | Covers | 17.23.2 | Pistons | 17.23.2 | Rods | 17.23.2 | |
| Connecting rods | 14.23.2 | Crank shaft | 14.23.2 | Thrust shaft | 14.23.2 | Tunnel shafts | 14.23.2 | Screw shaft | 14.23.2 | Propeller | 14.23.2 |
| Stern tube | 14.23.2 | 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 | steel | Identification Mark on Do. | LLOYDS 5901.2.3 4 5.6.7 14.9.10 | Material of Thrust shaft | steel | Identification Mark on Do. | as stated | | | | |
| Material of Tunnel shafts | steel | Identification Marks on Do. | LLOYDS 2.3.4.5.6.7.8 15.6.10 15.10 | Material of Screw shafts | steel | Identification Marks on Do. | as stated | | | | |
| Material of Steam Pipes | | Test pressure | | | | | | | | | |

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been examined under construction with a view to being classed + LMC with date, and the materials and workmanship are good. The boiler has been seen completed with fittings attached, at the works of the makers, and tested to a hydraulic pressure and found satisfactory. The following mark has been stamped on the front. No 59
Lloyd's Reg-
1900 Act
No. 23.11.10 The engines have been examined in detail & when last seen were erected in the works of the maker, ready for shipment to Regensburg, where the following remains to be done—viz: The machinery to be seen fitted on board, the main steam pipe to be tested by water pressure, the pumping arrangements to be verified with the approved plan. The spare gear to be checked, the engines to be seen running under steam, and the safety valves to be adjusted under steam to the working pressure of 150 lbs sq. It is understood that this will be done at Regensburg, and when satisfactorily completed, the vessel's machinery will be eligible in my opinion to have the notation of + LMC with date in the Register Book.

2.00 of this fee £3 to be credited to trustee, see letter dated Jan 4th 1911

| | | | |
|-------------------------------|----------|-------------------|--------|
| The amount of Entry Fee | £ 25.30 | When applied for, | 9/2/11 |
| Special | £ 202.40 | When received, | 9/2/11 |
| Donkey Boiler Fee & telegrams | £ 113.60 | | |
| Travelling Expenses (if any) | £ 341.30 | | |

[Signature]

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute THU 13 APR 1911

WED 7 JUN 1911

Assigned *[Signature]* on Tri Rpt 2641



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Certificate (if required) to be sent to

The Surveyors are requested to write on or below the space for Committee's Minute.