

REPORT ON MACHINERY.

No.

7634

RECEIVED 13 OCT 1894

Port of *Lerik*

No. in Survey held at *Lerik*
Book.

Date, first Survey *May 19th* Last Survey *Oct-11th* 1894

(Number of Visits *16*)

on the *steamer s.s. "ΣΟΦΙΑ" (Sofia)*

Gross *695.92*
Net *429.32*

Builder *G. Karacatzanis* Built at *Lerik*

By whom built *Ramage & Ferguson Ltd* When built *1894*

Machines made at *Lerik* By whom made *Ramage & Ferguson Ltd* when made *1894*

Boilers made at *Lerik* By whom made *Ramage & Ferguson Ltd* when made *1894*

Registered Horse Power *99* Owners *Hadji Isak-Lurkouch* Port belonging to *Smyrna*

Horse Power as per Section 28 *99*

ENGINES, &c.— Description of Engines *Inverted Triple Compound* No. of Cylinders *3*
Diameter of Cylinders *15.24.39"* Length of Stroke *30"* Revolutions per minute *105* Diameter of Screw shaft *as per rule 7.38*
Diameter of Tunnel shaft *as per rule 7.02* Diameter of Crank shaft journals *7 1/2"* Diameter of Crank pin *7 1/2"* Size of Crank webs *5 1/2" x 12 1/2"*
Diameter of screw *11-0"* Pitch of screw *12-6"* No. of blades *4* State whether moveable *No* Total surface *29 sq ft*
No. of Feed pumps *2* Diameter of ditto *2 1/2"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
No. of Bilge pumps *2* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work *Yes*
No. of Donkey Engines *2* Sizes of Pumps *6x6x4 & 7x12x8* No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room *3 = 2-2" x 1-2 1/4"* In Holds, &c. *Fore hold 2-2"*
After hold 2-2" *After mill 1-2 1/4"*
No. of bilge injections *16* sizes *4"* Connected to condenser, and circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 2 1/2"*
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 *Yes*
Are all connections with the sea direct on the skin of the ship *Yes* Are they Valves or Cocks *Both*
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 the pipes carried through the bunkers *None* How are they protected *Yes*
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*
Were stern tube, propeller, screw shaft, and all connections examined *on the stocks* *Sept 18-94* Is the screw shaft tunnel watertight *Yes*
Is it fitted with a watertight door *Yes* worked from *the top platform*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *1714.6 sq ft*
No. and Description of Boilers *One Horizontal Multitubular* Working Pressure *160* Tested by hydraulic pressure to *320*
Date of test *1-9-94* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *55 sq ft* No. and Description of safety valves to boiler *2 Spring*
Area of each valve *4.07 sq ft* Pressure to which they are adjusted *165* Are they fitted *Yes*
Are easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean diameter of boilers *14-0"*
Material of shell plates *Steel* Thickness *1 1/8"* Description of riveting: circum. seams *Double* long. seams *Double butt ships*
Diameter of rivet holes in long. seams *1 3/16"* Pitch of rivets *8 1/2"* Lap of plates or width of butt straps *18"*
Percentages of strength of longitudinal joint *86.2* Working pressure of shell by rules *164* Size of manhole in shell *16 x 12*
No. of compensating ring *31" x 27"* No. and Description of Furnaces in each boiler *3 Furness's* Material *Steel* Outside diameter *41"*
Thickness of plain part *9"* Thickness of plates *1 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *Yes*
Working pressure of furnace by the rules *169.9* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *9/16"*
No. of stays to ditto: Sides *7 3/4"* Back *7 3/4"* Top *7 3/4"* If stays are fitted with nuts or riveted heads *None* Working pressure by rules *182*
Material of stays *Steel* Diameter at smallest part *1 3/32"* Area supported by each stay *60 sq in* Working pressure by rules *162* End plates in steam space: *Double nut*
Material *Steel* Thickness *1 5/16"* Pitch of stays *16 x 15"* How are stays secured *Double nut* Working pressure by rules *163* Material of stays *Steel*
Diameter at smallest part *2 1/4"* Area supported by each stay *240 sq in* Working pressure by rules *172* Material of Front plates at bottom *Steel*
Thickness *3/4"* Material of Lower back plate *Steel* Thickness *3/8"* Greatest pitch of stays *12 1/4"* Working pressure of plate by rules *169*
Diameter of tubes *3 1/2"* Pitch of tubes *4 3/8"* Material of tube plates *Steel* Thickness: Front *3/4"* Back *3/4"* Mean pitch of stays *9 3/8"*
Height across wide water spaces *15"* Working pressures by rules *180* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *6 1/2" x 1 1/2"* Length as per rule *25"* Distance apart *7 3/4"* Number and pitch of Stays in each *2 x 7 3/4"*
Working pressure by rules *174* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked *Yes*
Diameter *Yes* Length *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivet *Yes*
Pitch of rivets *Yes* Working pressure of shell by rules *Yes* Diameter of flue *Yes* Material of flue plates *Yes* Thickness *Yes*
Are they fitted with rings *Yes* Distance between rings *Yes* Working pressure by rules *Yes* End plates: Thickness *Yes* How stayed *Yes*
Working pressure of end plates *Yes* Area of safety valves to superheater *Yes* Are they fitted with easing gear *Yes*

DONKEY BOILER— Description *Vertical 3 Cross Tubes*
 Made at *Gateshead* By whom made *Blake Chapman & Co* When made *1.9.94* Where fixed *Stokehold*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *4406* Fire grate area *14* ^{sq} Description of safety valves *Spring*
 No. of safety valves *2* Area of each *7.5* Pressure to which they are adjusted *80* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *5-0* Length *10-0* Material of shell plates *Steel* Thickness *3/8*
 Description of riveting long. seams *Lap double* Diameter of rivet holes *3/4* Whether ~~punched~~ drilled *Yes* Pitch of rivets *2 3/4*
 Lap of plating *3 3/8* Per centage of strength of joint Rivets *42.7* Thickness of shell crown plates *1/2* Radius of do. *5-0* No. of Stays to do. *4*
 Dia. of stays. *1 3/8* Diameter of furnace Top *3-8 1/2* Bottom *4-3* Length of furnace *4-6* Thickness of furnace plates *1/2* Description of joint *Lap single* Thickness of furnace crown plates *1/2* Stayed by *4 Crown stays* Working pressure of shell by rules *89*
 Working pressure of furnace by rules *82.5* Diameter of uptake *14* Thickness of uptake plates *13/32* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:—

In accordance with the requirements of the rules.—

The foregoing is a correct description,

Manufacturer.

Ramage Ferguson & Co
Richard Ramage Director

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery & boilers of this vessel have been examined during construction.—

The workmanship & material is good.— The engines have been tried under steam, & the safety valves adjusted to their respective working pressures with satisfactory results.—

The vessel is therefore eligible in my opinion to be classed as regards the machinery, and to have the notation of +LMC. 10.94.— recorded in the Reg. Book.—

The boiler drawings &c are enclosed herewith.—

It is submitted that this vessel is eligible to have the notation of +LMC 10,94 recorded

LMC
18/10/94

Certificate (if required) to be sent to

The amount of Entry Fee..	£ 1 : 0 :	When applied for,
Special	£ 14 : 17 :	<i>Oct 16th 18.94</i>
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any) £	:	<i>Oct 16th 18.94</i>

Maurice Robson

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

Committee's Minute

FRIDAY 19 OCT 1894

Assigned

+ LMC 10,94



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 Foundation