Rpt. 4.

REPORT ON MACHINERY.

No. 3895

Received at London Office FRI. APR. 17. 1914

Date of writing Report 14/4/14 19 When handed in at Local Office 14/4/14 19 Port of Trieste.

No. in Reg. Book. Survey held at Monfalcone Date, First Survey Mch 25. 13 Last Survey April 11th 1914

(Number of Visits 13.)

on the Machinery of S.S. "ERNY" (No 46 at Builders Yard) Tons Gross 6515 Net 4171

Master M. Martinolich Built at Monfalcone. By whom built Cantiere Navale Triestino When built 1914

Engines made at Greenock. By whom made J.G. Kincaid & Co. when made 1914.

Boilers made at Do. By whom made Do. when made 1914.

Registered Horse Power Owners Lloyd Austriaco a. Nav. Port belonging to Trieste.

Nom. Horse Power as per Section 28 520 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27" - 44" - 73" Length of Stroke 48" Revs. per minute 75 Dia. of Screw shaft as per rule ..... as fitted ..... 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 in 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 .....

Dia. of Tunnel shaft as per rule ..... as fitted ..... Dia. of Crank shaft journals as per rule ..... as fitted ..... Dia. of Crank pin ..... Size of Crank webs ..... Dia. of thrust shaft under collars ..... Dia. of screw ..... Pitch of Screw ..... No. of Blades ..... State whether moveable ..... Total surface .....

No. of Feed pumps ..... Diameter of ditto ..... Stroke ..... Can one be overhauled while the other is at work .....

No. of Bilge pumps ..... Diameter of ditto ..... Stroke ..... Can one be overhauled while the other is at work .....

No. of Donkey Engines Two. Sizes of Pumps 8"x5"x8" 9"x13"x10" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 each side 3½" Bore In Holds, &c. 1-3½" bell suction at middle line in Nos 1, 2 & 5 Holds, 1-each side 3½ Bore in Holds Nos 3, 4 & 6.

No. of Bilge Injections 1 sizes 9" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size Yes. 3½

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 Valves & 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

What pipes are carried through the bunkers Donard tank & bilge suction How are they protected Boxed in.

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 8/1/14 of Stern Tube 21/1/14 Screw shaft and Propeller 3/4/14.

Is the Screw Shaft Tunnel watertight Yes. Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record 3) Manufacturers of Steel .....

Total Heating Surface of Boilers 7719 Is Forced Draft fitted Yes No. and Description of Boilers 3 Single ended

Working Pressure 180lbs. Tested by hydraulic pressure to ..... Date of test ..... No. of Certificate .....

Can each boiler be worked separately Yes Area of fire grate in each boiler 59 ft. No. and Description of Safety Valves to each boiler 2 Direct Spring Area of each valve 9.62 Pressure to which they are adjusted 185 lbs. Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers ..... Length ..... Material of shell plates .....

Thickness ..... Range of tensile strength ..... Are the shell plates welded or flanged ..... Descrip. of riveting: cir. seams .....

long. seams ..... Diameter of rivet holes in long. seams ..... Pitch of rivets ..... Lap of plates or width of butt straps .....

Per centages of strength of longitudinal joint rivets ..... plate ..... Working pressure of shell by rules ..... Size of manhole in shell .....

Size of compensating ring ..... No. and Description of Furnaces in each Boiler ..... Material ..... Outside diameter .....

Length of plain part top ..... bottom ..... Thickness of plates crown ..... bottom ..... Description of longitudinal joint ..... No. of strengthening rings .....

Working pressure of furnace by the rules ..... Combustion chamber plates: Material ..... Thickness: Sides ..... Back ..... Top ..... Bottom .....

Pitch of stays to ditto: Sides ..... Back ..... Top ..... If stays are fitted with nuts or riveted heads ..... Working pressure by rules .....

Material of stays ..... Diameter at smallest part ..... Area supported by each stay ..... Working pressure by rules ..... End plates in steam space:

Material ..... Thickness ..... Pitch of stays ..... How are stays secured ..... Working pressure by rules ..... Material of stays .....

Diameter at smallest part ..... Area supported by each stay ..... Working pressure by rules ..... Material of Front plates at bottom .....

Thickness ..... Material of Lower back plate ..... Thickness ..... Greatest pitch of stays ..... Working pressure of plate by rules .....

Diameter of tubes ..... Pitch of tubes ..... Material of tube plates ..... Thickness: Front ..... Back ..... Mean pitch of stays .....

Pitch across wide water spaces ..... Working pressures by rules ..... Girders to Chamber tops: Material ..... Depth and thickness of girder at centre ..... Length as per rule ..... Distance apart ..... Number and pitch of stays in each .....

Working pressure by rules ..... Superheater or Steam chest; how connected to boiler ..... Can the superheater be shut off and the boiler worked separately ..... Diameter ..... Length ..... Thickness of shell plates ..... Material ..... Description of longitudinal joint ..... Diam. of rivet holes ..... Pitch of rivets ..... Working pressure of shell by rules ..... Diameter of flue ..... Material of flue plates ..... Thickness .....

If stiffened with rings ..... Distance between rings ..... Working pressure by rules ..... End plates: Thickness ..... How stayed .....

Working pressure of end plates ..... Area of safety valves to superheater ..... Are they fitted with easing gear .....

For Cantiere Navale Triestino see Engine & Boiler Report

W220-0037

© 2019 Lloyd's Register Foundation

VERTICAL DONKEY BOILER— *Manufacturers of Steel* to Donkey Boiler.

No. ____ *Description* ____

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* ____ *Description of Safety 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* Rivets ____ Plates ____

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* ____ *Radius of do.* ____ *Stayed by* ____

Diameter of uptake ____ *Thickness of uptake plates* ____ *Thickness of water tubes* ____ *Dates of survey* ____

SPARE GEAR. *State the articles supplied :—* 1 Propeller, 1 Propeller shaft, 2 main bearing bolts, 2 bottom end bolts, 2 top end bolts, 1 set coupling bolts, 1 set valves for each pump, 1 set piston rings & springs for each main cylinder, main donkey check valves, assorted bolts nuts & screwed & plain iron barrels.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building — *During progress of work in shops* ____ *During erection on board vessel* 1913 Nov. 25. 1914 Jan. 5. 8. 21. Feb. 28. Mar. 4. 7. 16. 19. 20. 27 April 3. 11.

Total No. of visits 13. *Is the approved plan of main boiler forwarded herewith* No.

" " " *donkey* " " " ____

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* 16/3/14 & 17/3/14 *Engine and boiler seatings* 21/1/14. *Engines holding down bolts* 7/3/14

Completion of pumping arrangements 20/3/14 *Boilers fixed* 27/3/14 *Engines tried under steam* 11/4/14.

Main boiler safety valves adjusted 11/4/14 *Thickness of adjusting washers* Main Bk. 12 mm. Centre Bar. 10 & 10.5 mm. Port 12

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 Solid drawn copper ✓ *Test pressure* 160 lb. ✓

General Remarks (*State quality of workmanship, opinions as to class, &c.* The engines & Boilers have been properly fitted on board & tested under steam & the spare gear checked & the case is eligible in my opinion for the notation + LMC 4.14.

It is submitted that this vessel is eligible for THE RECORD. + LMC 4.14. F.D.

J.W.D. 20/4/14

J. D. Kitchen.

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

Certificate (if required) to be sent to ____

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	:	When applied for, 4/4/14
Special .. .. .. £	:	
Donkey Boiler Fee .. .. £	:	When received, 16/4/14 24/4/14
Travelling Expenses (if any) £ Cor 100	:	

Committee's Minute TUE. APR. 21. 1914

Assigned + LMC 4.14 J.D.

MACHINERY CERTIFICATE WRITTEN

© 2019 Lloyd's Register Foundation