

REPORT ON MACHINERY.

390

FRI. 3 APR 1891

Port of Sunderland

Received at London Office 18

To. 15990. Intro No 390

No. in Survey held at Sunderland

Date, first Survey Oct 29-1890 Last Survey 21st Nov 1891

eg. Book. "Oscar"

(Number of Visits)

Tons { Gross 1269.6
Net 818.1
When built 1891

Master E. Riech Built at Middleton By whom built Str R. Dixon & Co.

Engines made at S. Land. By whom made M. E. M. & Co. Ltd when made 1891

Boilers made at " By whom made " when made 1891

Registered Horse Power 120 Owners Giovanni G. Gargurevich & Sons Port belonging to Trieste.

ENGINES, &c.—

Description of Engines Tri compound. 3 Crank's. No. of Cylinders 3.

Diam. of Cylinders 19"-30" 49" Length of Stroke 33" Rev. per minute 40. Point of Cut off, High Pressure 5/8 Low Pressure 5/8

Diameter of Screw shaft 9 1/2" Diam. of Tunnel shaft 9" Diam. of Crank shaft journals 9 1/2" Diam. of Crank pin 9 1/2" size of Crank webs 14"-6 1/2"

Diameter of screw 13 f. Pitch of screw 13"-3" No. of blades 4 state whether moveable f total surface 44 f

No. of Feed pumps 2 diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes.

No. of Bilge pumps 2 diameter of ditto 3" Stroke 20" Can one be overhauled while the other is at work Yes.

Where do they pump from Sea, Eng. Room, Main & After Holds, after hull and Ballast tanks.

No. of Donkey Engines 2 Size of Pumps 6" x 9" x 3 1/2" x 5" Where do they pump from Sea, Hotwell, all Bilge

Tanks. Ballast-Sea this Condenser, Main & After Holds, after hull and Ballast tanks

Are all the bilge suction pipes fitted with roses Yes. Are the roses always accessible Yes. Are the sluices on Engine room bulkheads always accessible Yes.

No. of bilge injections 1 and sizes 1 1/2" Are they connected to condenser, or to circulating pump C.P.

How are the pumps worked by levers from M.P. engine

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.

What pipes are carried through the bunkers none How are they protected "

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes.

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes.

When were stern tube, propeller, screw shaft, and all connections examined in dry dock last vessel.

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top platform in Engine room.

BOILERS, &c.—

No. of Boilers 1 Description Cyl. multi. S. ended Material Steel Letter (for record) (S)

Working Pressure 160 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 24-1-91.

Description of superheating apparatus or steam chest none.

Can each boiler be worked separately only one Can the superheater be shut off and the boiler worked separately "

No. of square feet of fire grate surface in each boiler 58.5 f. Description of safety valves Spring No. to each boiler 2.

Area of each valve 4.0 f. Are they fitted with easing gear Yes. No. of safety valves to superheater " area of each valve "

Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 1 1/2" Diameter of boilers 14"-6"

Length of boilers 10 ft. description of riveting of shell long. seams T. r. butt. circum. seams d. r. lap. Thickness of shell plates 1 3/32"

Diameter of rivet holes 1 3/32" whether punched or drilled d. pitch of rivets 7/8" Lap of plating 1 1/4"

Percentage of strength of longitudinal joint 83.75. working pressure of shell by rules 162 lbs. size of manholes in shell 16" x 12"

Size of compensating rings 8" x 1 3/32" No. of Furnaces in each boiler 3. Description of Furnaces Plain, welded

Outside diameter 3'-4 1/2" length 6 feet. thickness of plates 3/4" description of joint welded. if rings are fitted no.

Greatest length between rings " working pressure of furnace by the rules 162 combustion chamber plating, thickness, sides 5/8" back 1/16" top 5/8"

Pitch of stays to ditto, sides 8 7/8" x 8 7/8" back 9 1/2" x 9 1/2" top 8 7/8" x 8 7/8" If stays are fitted with nuts or riveted heads Nuts. working pressure of plating by

rules 161 lbs. Diameter of stays at smallest part 1.9 in. working pressure of ditto by rules 170 lbs. end plates in steam space, thickness 1 1/2"

Pitch of stays to ditto 15 15/16" x 15 15/16" how stays are secured d. nuts. working pressure by rules 160 lbs. diameter of stays at

smallest part 2.44 in. working pressure by rules 160 lbs. Front plates at bottom, thickness 3/4" Back plates, thickness 7/8"

Greatest pitch of stays 12 1/8" working pressure by rules 190 lbs. Diameter of tubes 3 1/2" pitch of tubes 4 1/2" thickness of tube

plates, front 1 3/16" back 3/4" how stayed by tubes pitch of stays 9" width of water spaces 1 1/4"

Diameter of Superheater or Steam chest " length " thickness of plates " description of longitudinal joint " diam. of rivet holes "

Pitch of rivets " working pressure of shell by rules " diameter of flue " thickness of plates " If stiffened with rings "

Distance between rings " working pressure by rules " end plates of superheater, or steam chest; thickness " how stayed "

Superheater or steam chest; how connected to boiler "

DONKEY BOILER— Description *Vertical with four cross water tubes.*
 Made at *Stockton* by whom made *Riley Bros.* when made *21.2.91* where fixed *In Stockton*
 Working pressure *60 lbs* tested by hydraulic pressure to *120 lbs* No. of Certificate *203* fire grate area *20 sq. ft.* description of safety
 valves *Direct Spring* No. of safety valves *2* area of each *4.9"* if fitted with easing gear *Yes* if steam from main boilers can
 enter the donkey boiler *No* diameter of donkey boiler *6' 0"* length *12' 0"* description of riveting *Vertical Lap Double*
 Thickness of shell plates *3/8"* diameter of rivet holes *13/16"* whether punched or drilled *punched* pitch of rivets *2 1/4"* lap of plating *4 1/4"*
 per centage of strength of joint *41* thickness of crown plates *1/4"* stayed by *Six Stays 1 1/2" sq. dia.*
 Diameter of furnace, top *4' 10"* bottom *5' 5"* length of furnace *5' 2"* thickness of plates *1/2"* description of joint *Lap Single*
 Thickness of furnace crown plates *1/4"* stayed by *Same as shell crown plate* working pressure of shell by rules *44 lbs*
 Working pressure of furnace by rules *60 lbs* diameter of uptake *15"* thickness of plates *1/4"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *1 Propeller, 2 main Bearing Rods, 2 Crosshead
 Rods & nuts, 2 Crank pin Rods & nuts, 1 set Piston Springs, 1 set
 Coupling Bolt (without nuts), 1 set Feed & Relief pump valves
 Bolt and nut each, 2 Iron axes*

*For and on behalf of the North Eastern
 Marine Engineering Company*

Limited. Manufacturer of Propelling Machinery

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery and
 boilers of this vessel have been constructed under
 special survey of good materials & workmanship
 In my opinion this vessel is eligible for the notation
 in the Register Book of + L.M.C. 4/91. When the following
 work has been completed to the satisfaction of one
 of this Society's Surveyors viz. Donkey boiler to be
 placed & secured in position & its mountings fitted
 examined under steam & valves adjusted to the working
 pressure. Pumping arrangement completed as per
 approved plan. Sluice doors fitted. Machinery tried
 under steam & safety valves of main boilers adjusted to
 the working pressure.
 Middletons Surveyors advised.*

*The above mentioned work has been satisfactorily
 completed. On examining the spare gear it was found
 that no nuts were supplied with the Coupling Bolt, while
 the Boiler was found to be without fore and aft chocks
 at the bottom. It was recommended that nuts should be
 supplied to the spare set of Coupling Bolt; and chocks
 fitted to prevent any fore and aft movement in the main
 Boiler. The vessel leaves for the Pyne tomorrow and
 the Surveyors there will be advised.*

Wm. Austin. 2nd April 1891

The amount of Entry Fee £ *2 : 0 : 0* received by me,
 Special .. £ *20 : 5 : 0*
 Donkey Boiler Fee .. £ .. : .. :
 Certificate (if required) .. £ .. : .. :
 To be sent as per margin
 (Travelling Expenses, if any, £ *2/6*)

*This submitted that this vessel is eligible
 to have + L.M.C. 4-91 recorded W.A.
 6.4.91
 L. J. Tindley
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.*

Committee's Minute *TUES. 7 APR 1891
 + L.M.C. 4/91*

Str. to Sld. 3.4.91