

REPORT ON MACHINERY.

No. 48272.

Port of *Newcastle on Tyne*
 Received at London Office *SAT. 4 FEB 1905*
 No. in Survey held at *South Shields* Date, first Survey *July 10th* Last Survey *31st Jan 1905*
 Reg. Book. *S. S. STGGJ* (Number of Visits *28*)
 on the *S. S. STGGJ* Tons { Gross *3564*
 Master *M. Kounagovic* Built at *South Shields* By whom built *Messrs J. Readhead & Sons* When built *1905*
 Engines made at *South Shields* By whom made *Messrs J. Readhead & Sons* when made *1905*
 Boilers made at *South Shields* By whom made *Messrs J. Readhead & Sons* when made *1905*
 Registered Horse Power *295* Owners *G. Radic* Port belonging to *Dubrovnik*
 Nom. Horse Power as per Section 28 *294.5* Is Refrigerating Machinery fitted *No* Is Electric Light fitted *No*

Engines, &c.—Description of Engines *Tri compound* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *24x40x65* Length of Stroke *45* Revs. per minute *60* Dia. of Screw shaft *as per rule 13.17* Material of *scup iron*
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tight
 in the propeller boss *Yes* If the liner is in more than one length are the joints burned *Length* 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 *Fitting* If two
 liners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *4.5*
 Dia. of Tunnel shaft *as per rule 11.64* Dia. of Crank shaft journals *as per rule 12.22* Dia. of Crank pin *12 1/4* Size of Crank webs *8x15 1/2* Dia. of thrust shaft under
 collars *12 3/4* Dia. of screw *16.3* Pitch of screw *15-17-6* No. of blades *4* State whether moveable *No* Total surface *73 sq ft*
 No. of Feed pumps *2* Diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *Yes*
 No. of Bilge pumps *2* Diameter of ditto *3 1/2* Stroke *24* Can one be overhauled while the other is at work *Yes*
 No. of Donkey Engines *2* Sizes of Pumps *1 1/2 x 9 x 13 x 6 x 4 x 6 Duplex* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *3 of 3 1/2" diam* In Holds, &c. *Four hold P. & S. two of 3 1/2"*
 Main two of 3 1/2" diam (after hold F. two of 3 1/2" A two of 3 1/2")
 No. of bilge injections *1* sizes *5 1/2* Connected to condenser or to circulating pump *Pump* Is a separate donkey suction fitted in Engine room & size *Yes 3 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 *No sluice*
 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 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*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Nov Visual* Is the screw shaft tunnel watertight *Yes*
 Is it fitted with a watertight door *Yes* worked from *Top platform*

BOILERS, &c.— (Letter for record *2*) Total Heating Surface of Boilers *4590 sq ft* Is forced draft fitted *No*
 No. and Description of Boilers *Two Single ended* Working Pressure *160* Tested by hydraulic pressure to *320*
 Date of test *7.11.04* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *58 sq ft* No. and Description of safety valves to
 each boiler *Two Spring loaded* Area of each valve *7.07* Pressure to which they are adjusted *165 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers *2 1/2* Mean dia. of boilers *15.9* Length *10.6* Material of shell plates *Stal*
 Thickness *1 1/2* Range of tensile strength *27-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Lap D. R. long. seams D. B. S*
 Diameter of rivet holes in long. seams *1 3/8* Pitch of rivets *8 3/16* Lap of plates or width of butt straps *1-9 1/2*
 Per centages of strength of longitudinal joint *84.4* Working pressure of shell by rules *162* Size of manhole in shell *12" x 16"*
 Size of compensating ring *6" x 1 3/16* No. and Description of Furnaces in each boiler *3 Morrison* Material *Stal* Outside diameter *3-10"*
 Length of plain part *top 1 1/2 bottom 1 1/2* Thickness of plates *3 1/2* Description of longitudinal joint *Welded* No. of strengthening rings *—*
 Working pressure of furnace by the rules *164* Combustion chamber plates: Material *Stal* Thickness: Sides *5/8* Back *5/8* Top *5/8* Bottom *7/8*
 Pitch of stays to ditto: Sides *8 1/2 x 9* Back *9 x 8 1/2* Top *8 1/2 x 8 1/2* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *166*
 Material of stays *Iron* Diameter at smallest part *1 5/8* Area supported by each stay *76.5 sq in* Working pressure by rules *145* End plates in steam space:
 Material *S* Thickness *1 1/2* Pitch of stays *17 1/2 x 1 1/2* How are stays secured *d. nut & rivet* Working pressure by rules *161* Material of stays *stal*
 Diameter at smallest part *5.05* Area supported by each stay *31.4 sq in* Working pressure by rules *180* Material of Front plates at bottom *stal*
 Thickness *3/4* Material of Lower back plate *stal* Thickness *1 1/2* Greatest pitch of stays *15 1/2 x 10* Working pressure of plate by rules *190*
 Diameter of tubes *3 1/2* Pitch of tubes *6 3/4 x 1 1/2* Material of tube plates *stal* Thickness: Front *3/4* Back *3/4* Mean pitch of stays *9 1/2*
 Pitch across wide water spaces *15 1/2* Working pressures by rules *180* Girders to Chamber tops: Material *S* Depth and
 thickness of girder at centre *8" x 1 1/2* Length as per rule *28* Distance apart *8 3/4* Number and pitch of Stays in each *Two of 8"*
 Working pressure by rules *190* 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

DONKEY BOILER— No. *One* Description *Marine type*
 Made at *South Shields* By whom made *Messrs J. Readhead & Sons* When made *1905* Where fixed *Main deck above boiler*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *6887* Fire grate area *22.5* Description of safety valves *Spring loaded*
 No. of safety valves *2* Area of each *7.07* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *9'* Length *9'* Material of shell plates *Steel* Thickness *7/16"* Range of tensile strength *27 1/2* Descrip. of riveting long. seams *Lap J. R.* Dia. of rivet holes *15/16"* Whether punched or drilled *Drilled* Pitch of rivets *3"*
 Lap of plating *4 1/2"* Per centage of strength of joint *68.75* Rivets *68.75* Thickness of shell crown plates *3/4"* Radius of do. *—* No. of Stays to do. *6*
 Dia. of stays *2.87* Diameter of furnace *2.10* Bottom *✓* Length of furnace *5.9* Thickness of furnace plates *7/16"* Description of joint *Lap S. R.* Thickness of furnace crown plates *1/2"* Stayed by *1 3/4" stays 9 3/4" x 9"* Working pressure of shell by rules *82*
 Working pressure of furnace by rules *80* Diameter of tubes *3 1/4"* Thickness of tube plates *F 3/4" B 1 1/4"* Thickness of water tubes *1/4"*

SPARE GEAR. State the articles supplied:— *1 Spare propeller shaft & propeller, 2 bottom end brasses, 2 Top end, 2 bottom end, 2 main bearing bolts & nuts, 1 set coupling bolts, 1 set fuel, oil, air, & air pump valves, piston bolts, iron, bolts & nuts assorted*

The foregoing is a correct description,

John Readhead & Sons Manufacturer.

Dates of Survey { During progress of work in shops - 1904 July 10 Aug 25 Sep 8 14 20 Oct 11 17 21 28 31 Nov 4 7 10 15 18 23 Dec 1 5 8 12 13 15 16 21 23 1905 Jan 12 14 31
 { During erection on board vessel - - -
 while building { Total No. of visits *28* Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

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

The machinery of this vessel has been built under special survey & in my opinion is eligible for record F.L.M.C. 1.05

It is submitted that this vessel is eligible for THE RECORD F.L.M.C. 1.05.

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The amount of Entry Fee. £ *2:* : : When applied for, *3 FEB 1905*
 Special £ *34: 11:* : :
 Donkey Boiler Fee £ : : : When received, *7.2.1905*
 Travelling Expenses (if any) £ : : :
 Committee's Minute *TUES. 7 FEB 1905*
 Assigned *+ Lm 6 1.05*

G. A. Dayden Joyne
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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MACHINERY CERTIFICATE
 WRITTEN.

Newcastle-on-Tyne

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