

# REPORT ON MACHINERY.

Port of Newcastle on Tyne

Received at London Office SAI, 4 FEB 1905

No. in Survey held at South Shields

Date, first Survey July 10<sup>th</sup>

Last Survey 31<sup>st</sup> Jan 1905

Reg. Book.

(Number of Visits 28)

on the S.S. STGGJ

Tons { Gross 3564  
Net 2319

Master M. Kamenovic 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 13.17 Material of screw shaft Cast 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 11.64 Dia. of Crank shaft journals 12.22 Dia. of Crank pin 12.14 Size of Crank webs 8x15.5 Dia. of thrust shaft under  
 collars 12.5/4 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 new 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 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 13/16 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  
 rivets. 84.51 plate. 84.51 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 — Thickness of plates 3/4 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 3/4 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 1/32 Pitch of stays 17 1/2 x 1 1/2 How are stays secured A. nut & washer Working pressure by rules 161 Material of stays Stal  
 Diameter at smallest part 5.05 Area supported by each stay 314 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 1/16 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 4 1/16 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 sq ft* 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 *19.5* Thickness of shell *end* 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 tubes plates *F 3/4" B 3/16"* 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, bilge, air, & air pump valves, piston bolts, iron, bolts & nuts described*

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.

*J.S.*  
*H.S.*  
*4.2.05*  
*H. 2.05*

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.)

The amount of Entry Fee. . . £ *2:* . . . When applied for, *3 FEB 1905*  
 Special . . . £ *34: 11:* . . .  
 Donkey Boiler Fee . . . £ . . .  
 Travelling Expenses (if any) £ . . .

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

Committee's Minute

TUES. 7 FEB 1905

Assigned

*+ L.M.C. 1.05*

MACHINERY CERTIFICATE WRITTEN.



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