

## REPORT ON MACHINERY.

Port of *London*Received at London Office *JUN 1 1897*No. in Survey held at *London*Date, first Survey *18<sup>th</sup> May 1897* Last Survey *27<sup>th</sup> May 1897*

Reg. Book.

*208*, on the *S. S. Agnes*(Number of Visits *1*)Tons { Gross *887*Net *547*When built *1890*Master *Bratschneider* Built at *Middlesbrough* By whom built *Bratschneider & Dixon*Engines made at *Stettin* By whom made *Blair & Co. Ltd. & J. Stewart & Sons Ltd.*When made *1890*Boilers made at *London* By whom made *J. Stewart & Sons Ltd.*When made *1897*Registered Horse Power *97*Owners *J. Rodenmacher*Port belonging to *Danzig*Nom. Horse Power as per Section 28 *100*Is Electric Light fitted *No*ENGINES, &c.—Description of Engines *Triple Expansion*No. of Cylinders *Three* No. of Cranks *Two*Diameter of Cylinders *15" 25 7/8 42"* Length of Stroke *33"* Revolutions per minute *70* Diameter of Screw shaft *as per rule 8 1/2 7/8*Diameter of Tunnel shaft *as per rule 8 1/8 7/8* Diameter of Crank shaft journals *8 3/4* Diameter of Crank pin *8 3/4* Size of Crank webs *as fitted 8 5/8*

Diameter 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 Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &amp;c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room &amp; size

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

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

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

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight

Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record *8*) Total Heating Surface of Boilers *1470.74 sq ft* Is forced draft fitted *No*No. and Description of Boilers *Two Multi-tubular* Working Pressure *165 lb* Tested by hydraulic pressure to *320 lb*Date of test *9/2/97* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *20 sq ft* No. and Description of safety valves to each boiler *Two Spring*Area of each valve *3 1/4 1/2* Pressure to which they are adjusted *165 lb* Are they fitted with easing gear *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *9* Mean diameter of boilers *8' 8"*Length *9' 10"* Material of shell plates *Steel* Thickness *5/16* Description of riveting: circum. seams *Lap Rivet* long. seams *Lap Rivet*Diameter of rivet holes in long. seams *1 7/16* Pitch of rivets *4 7/8* Lap of plates on width of butt straps *8 1/2*Per centages of strength of longitudinal joint rivets *80* Working pressure of shell by rules *184 lb* Size of manhole in shell *16 x 12*Size of compensating ring *7 x 1 7/16* No. and Description of Furnaces in each boiler *Two Plain* Material *S* Outside diameter *2' 7 1/4*Length of plain part *top 6' 6" bottom 6' 6"* Thickness of plates *top 5/8 bottom 5/8* Description of longitudinal joint *Welded* No. of strengthening rings *None*Working pressure of furnace by the rules *172 lb* Combustion chamber plates: Material *S* Thickness: Sides *5/8* Back *7/16* Top *5/8* Bottom *9/32*Pitch of stays to ditto: Sides *8 x 8* Back *7 1/2 x 7 1/2* Top *9 x 8* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *167 lb*Material of stays *S* Diameter at smallest part *1 7/16* Area supported by each stay *64.56 sq in* Working pressure by rules *170 lb* End plates in steam space:Material *S* Thickness *3/4* Pitch of stays *16 1/2* How are stays secured *Double Nuts* Working pressure by rules *174 lb* Material of stays *S*Diameter at smallest part *2 7/8* Area supported by each stay *272 sq in* Working pressure by rules *212 lb* Material of Front plates at bottom *S*Thickness *3/4* Material of Lower back plate *S* Thickness *3/4* Greatest pitch of stays *12* Working pressure of plate by rules *175 lb*Diameter of tubes *3* Pitch of tubes *4 x 4* Material of tube plates *S* Thickness: Front *3/4* Back *3/4* Mean pitch of stays *8*Pitch across wide water spaces *11* Working pressures by rules *185 lb* Girders to Chamber tops: Material *S* Depth andthickness of girder at centre *7 1/2 x 1 1/2* Length as per rule *26* Distance apart *9* Number and pitch of Stays in each *2 x 8*Working pressure by rules *197 lb* Superheater on Steam chest; how connected to boiler *See sketch* Can the superheater be shut off and the boiler worked separately *Yes*Diameter *3' 0"* Length *6' 0"* Thickness of shell plates *7/16* Material *S* Description of longitudinal joint *See sketch* Diam. of rivetholes *3/4* Pitch of rivets *2 1/2* Working pressure of shell by rules *180 lb* 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 *✓*

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DONKEY BOILER— Description

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers can enter the donkey boiler \_\_\_\_\_

Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ 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 \_\_\_\_\_

Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,  
*Charles J. Farrell* Manufacturer.

Dates of Survey while building { During progress of work in shops - From Nov 16<sup>th</sup> 96 to March 3<sup>rd</sup> 1897.  
During erection on board vessel - From March 18<sup>th</sup> to 25<sup>th</sup> May. 1897.  
Total No. of visits 32.

General Remarks (State quality of workmanship, opinions as to class, &c.) *Now done; - Two new main Boilers as above described with new smoke-boxes and funnel and mountings complete fitted in place Engines converted by fitting new H.P. cylinder & Piston and Slide Valve The original H.P. cylinder turned up in place and the cylinder bored and fitted with new liner.*

*Tail shaft drawn in and with crank. Thrust & Mount shaft Sea Connections & Stern-bush examined. Slide Valves and Condenser examined. Propeller and outside fastenings of Sea Connections examined.*

*Repairs: - New main steam Pipes tested and fitted in place. A new L.P. cylinder cover fitted.*

*All Pumping arrangements and Slide Valves examined and now satisfactory condition. Boilers tried under steam and all Safety Valves adjusted as above.*

*N.B. At the trial trip of this vessel a crack developed in the H.P. cylinder in way of the Valve box casing. It has been recommended that a new H.P. cylinder be fitted and that this will be done within three months. In the meantime a substantial patch of Gun Metal has been fitted in this defect and the H.P. cylinder is at present made efficient.*

*It is respectfully recommended that this vessel's machinery is capable to remain as classed with fresh record of +NB 037 925 5.97 Subject to the H.P. cylinder being again examined or renewed before end of August 97.*

The amount of Entry Fee. £ : : When applied for, 1/6/1897

Special £ 7 : 10 : : When received, 23/6/1897

Donkey Boiler Fee £ 6 : 15 : : *has 4/6*

Travelling Expenses (if any) £ : : *15*

Committee's Minute \_\_\_\_\_

Assigned *B & S 5.97* subject *Tpd. 97*

*note limit + non-limit + R.B. 5.97*

*J. Messer Ritchie*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

TUES. 2 JAN 1900  
FRI. 2 DEC 1899  
TUES. 27 FEB 1900

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Port of London

Continuation of Report No.

dated May on theS.S. AGNESRepairs due to Wear & Tear + Completion of the S. S. AGNES

The ~~Eng~~ Boiler casing above Bridge deck renewed + made 4' 6" high above deck & extending below beams to form casing 7' 6" high. The top of casing beams to same renewed. The tie plates each side casing also renewed also angle iron bar. The tie plate increased in width to 9' x 5/8".

The lower part of the stoke hold bulkhead above floor plate, form part of end of Ballast Tank in main hold renewed. Between the centre turning girders + the wing plates doubled. The wing plates on Starboard side of bulkhead from lower deck strung downwards to floor plate renewed. Two girder plates and angles each side renewed.

The Engine Room Seating on Starboard Side repaired with one new top plate + one new front plate + angle

Six new floors fitted under Boilers with double <sup>corner</sup> angles on upper edges and all the remaining floors fitted with double corner bars. The bulk strung and angles at Bulk removed + replaced. All the <sup>also stoke strung + double plates</sup> cement cut out between the floors in Bulk Space & a number of defective iron rivets renewed + cement replaced.

The tween deck casing around Boiler Space repaired with four new plates.

The Lower deck strung in port coal bunker repaired by fitting 6" x 4" x 5/8" angle on inner edge.

The coal Bunkers cleaned + recoated + ceiling removed in way of new floors + partly renewed.

The plating of the coal Bunkers + angle iron stiffeners largely renewed. The main deck beam angles in bunkers in way of coaling hatches renewed.

The Bridge deck caulked each side of Engine Room casing + doubled with 2" pitch pine where worn. Fastened with galvanized iron screws + doweled. The main deck caulked under masts etc.

The Water Ballast tank <sup>in main hold</sup> ~~renewed~~ <sup>put water to light</sup> ~~done~~ <sup>etc</sup> etc.

*Edward J. D. Lacey*

It may be observed that that the old boiler was removed + new fitted. E.J.D.