

REPORT ON MACHINERY.

No. 56606

Port of *Newcastle-on-Tyne*

Received at London Office

FNL 7 MAY 1909

No. in Survey held at *Newcastle*Date, first Survey *24 Oct. 1908*Last Survey *April 27th 1909*

Reg. Book.

4949 on the

S/S "PATELLA"(Number of Visits *45*)Gross *5660*Net *3400*When built *1909*

Master

Built at *Newcastle*By whom built *Swan Hunter & Wigham, Newcastle*Engines made at *Newcastle*By whom made *Wallsend Shipways & Co. Ltd.*when made *1909*Boilers made at *Newcastle*By whom made *Wallsend Shipways & Co. Ltd.*when made *1909*

Registered Horse Power

Owners *Anglo-Saxon Petroleum Co*Port belonging to *London*Nom. Horse Power as per Section 28 *448*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 *26 1/2", 43", 72"*Length of Stroke *48"*Revs. per minute *67*Dia. of Screw shaft *as per rule 14 1/2"*Material of *S.*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 *yes*

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 *yes*

If two

liners are fitted, is the shaft lapped or protected between the liners *yes*Length of stern bush *5'-3"*Dia. of Tunnel shaft *as per rule none*Dia. of Crank shaft journals *as per rule 13 1/2"*Dia. of Crank pin *14"*Size of Crank webs *28 1/2" x 9 1/2"*

Dia. of thrust shaft under

collars *14"*Dia. of screw *17'-9"*Pitch of Screw *16'-9"*No. of Blades *4*State whether moveable *no*Total surface *100 sq. ft.*No. of Feed pumps *2*Diameter of ditto *4 1/2"*Stroke *24"*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *4 1/2"*Stroke *24"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *3*Sizes of Pumps *6x4x6, 7x9 1/2x18, 8x6x10* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *four of 3 1/2"*In Holds, &c. *Cargo 2 of 2 1/2"*No. of Bilge Injections *1* sizes *8"*Connected to condenser, or to circulating pump *C.P.*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 *yes*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 *yes*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 *9-3-09* of Stern Tube *9-3-09* Screw shaft and Propeller *18-3-09*Is the Screw Shaft Tunnel watertight *none*Is it fitted with a watertight door *yes*worked from *yes*BOILERS, &c.—(Letter for record *S.*)Manufacturers of Steel *John Spencer & Sons Ltd.*Total Heating Surface of Boilers *7725*Is Forced Draft fitted *no*No. and Description of Boilers *Three Single End.*Working Pressure *180 lbs.*Tested by hydraulic pressure to *360 lbs.*Date of test *30-12-08*No. of Certificate *7794*Can each boiler be worked separately *yes*Area of fire grate in each boiler *68 sq. ft.*

No. and Description of Safety Valves to

each boiler *2 Spring*Area of each valve *8.29*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 *2 feet*dia. of boilers *16 feet*Length *11'-9"*Material of shell plates *S.*Thickness *1 1/4"*Range of tensile strength *29500*Are the shell plates welded on flanged ends, Descrip. of riveting: cir. seams *2 & Lap*long. seams *9. Nuts*Diameter of rivet holes in long. seams *1 1/2"*Pitch of rivets *9 1/2"*Lap of plates on width of butt straps *19 1/2"*

Per centages of strength of longitudinal joint

rivets *88.7*Working pressure of shell by rules *185*Size of manhole in shell *16" x 12"*Size of compensating ring *McKeils*No. and Description of Furnaces in each boiler *3 horizontal*Material *S.* Outside diameter *4'-1 1/2"*Length of plain part *top*Thickness of plates *bottom*crown *19 1/2"*Description of longitudinal joint *Weld*No. of strengthening rings *yes*Working pressure of furnace by the rules *189*Combustion chamber plates: Material *S.*Thickness: Sides *5/8"*Back *5/8"*Top *5/8"*Bottom *1 1/2"*Pitch of stays to ditto: Sides *8 3/4" x 8 3/4"*Back *8 3/4" x 8 3/4"*Top *8 3/4" x 8 3/4"*If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *186*Material of stays *S.*Diameter at smallest part *2.03*Area supported by each stay *74.4*Working pressure by rules *245*

End plates in steam space:

Material *S.*Thickness *1 1/2"*Pitch of stays *22 1/2" x 17"*How are stays secured *2 nuts & 14"*Working pressure by rules *186*Material of stays *S.*Diameter at smallest part *7.24*Area supported by each stay *383*Working pressure by rules *197*Material of Front plates at bottom *S.*Thickness *1"*Material of Lower back plate *S.*Thickness *3/8"*Greatest pitch of stays *13 3/4"*Working pressure of plate by rules *183*Diameter of tubes *3"*Pitch of tubes *4 1/2" x 4 1/2"*Material of tube plates *S.*Thickness: Front *1 1/2"*Back *3/4"*Mean pitch of stays *8 1/2"*Pitch across wide water spaces *14"*Working pressures by rules *183*Girders to Chamber tops: Material *S.*

Depth and

thickness of girder at centre *9 1/2" x 1 1/2"*Length as per rule *35 1/4"*Distance apart *8 1/2"*Number and pitch of stays in each *3 @ 8 1/2"*Working pressure by rules *183*Superheater or Steam chest; how connected to boiler *yes*

Can the superheater be shut off and the boiler worked

separately *yes*Diameter *yes*Length *yes*Thickness of shell plates *yes*Material *yes*Description of longitudinal joint *yes*

Diam. of rivet

holes *yes*Pitch of rivets *yes*Working pressure of shell *yes*Diameter of flue *yes*Material of flue plates *yes*Thickness *yes*If stiffened with rings *yes*Distance between rings *yes*Working pressure by rules *yes*End plates: Thickness *yes*How stayed *yes*Working pressure of end plates *yes*Area of safety valves to superheater *yes*Are they fitted with easing gear *yes*

Lloyd's Register

Foundation

WAB5 - 00005

VERTICAL DONKEY BOILER—Manufacturers of Steel

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 _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied: *4 Cast I. Propeller blades, 1 tail shaft, 1 set of H.P. & L.P. piston rings & springs, 12 piston bolts & nuts, 1 slide valve rod, 1 pair of top & bottom end braces, 2 main bearing bolts & nuts, 1 set of safety valve springs, 1 set of top & bottom end & coupling bolts & nuts, 1 eccentric strap, 1 air & circulating pump rods & nuts, 1 set of valves for ballast tank, 1 set of valves for air, circulating, feed & bilge pumps, 3 crank shaft, 30 boiler tubes, 50 condenser tubes & 100 Ferrules, & a quantity of assorted iron bars, also bolts and nuts, & 1 piston rod.*

The foregoing is a correct description,
FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.
 Manufacturer.

Dates of Survey while building { During progress of work in shops - - - - -
 { During erection on board vessel - - - - -
 Total No. of visits _____

Is the approved plan of main boiler forwarded herewith *Yes.*

" " " donkey " " " *Yes.*

Dates of Examination of principal parts—Cylinders *4-2-09*, Slides *4-2-09*, Covers *4-2-09*, Pistons *4-2-09*, Rods *18-12-08*

Connecting rods *18-12-08*, Crank shaft *22-2-09*, Thrust shaft *22-2-09*, Tunnel shafts *✓*, Screw shaft *22-2-09*, Propeller *22-2-09*

Stern tube *22-2-09*, Steam pipes tested *6-11-08*, Engine and boiler seatings *9-3-09*, Engines holding down bolts *19-3-09*

Completion of pumping arrangements *21-4-09*, Boilers fixed *19-3-09*, Engines tried under steam *21-4-09*

Main boiler safety valves adjusted *21-4-09*, Thickness of adjusting washers *P.B. 3/8" S. 3/8" F.B. 3/8" S. 3/8" S.B. 3/8" S. 3/8"*

Material of Crank shaft *S.*, Identification Mark on Do. *J.T.F.*, Material of Thrust shaft *S.*, Identification Mark on Do. *J.T.F.*

Material of Tunnel shafts *✓*, Identification Marks on Do. *J.T.F.*, Material of Screw shafts *S.*, Identification Marks on Do. *J.T.F.*

Material of Steam Pipes *Wrought Iron*, Test pressure *540 lb.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *Machinery and boilers built under Special Survey. Materials and workmanship good, engines and boilers examined under full steam and found satisfactory. It is submitted that this vessel is eligible for record of L.M.C. 4-09. This vessel is fitted with an oil burning installation on the Meijers System in accordance with Rule requirements.*

The report on the electric light installation will be forwarded when received from the electricians.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 4-09. Fitted for liquid fuel. Elec. light.

The amount of Entry Fee... £ 3 : :
 Special ... £ 42 : 8 :
 Donkey Boiler Fee ... £ 2 : 2 :
 Travelling Expenses (if any) ... £ 47-10-0

When applied for, *19 MAY 1909*
 When received, *19 MAY 1909*

Committee's Minute
 Assigned *11 MAY 1909*

J.W.D. 7/5/09
J.R.R. 9-5-09
J. Robinson.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Lloyd's Register Foundation

Write "Sliver Stroke" opposite its corresponding letter.

Form No. 1B.
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Certificate (if required) to be sent to:

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