

## REPORT ON MACHINERY.

No. 51526.

TUES. 4 SEP 1906

Port of Newcastle

Received at London Office

19

No. in Survey held at Newcastle  
Reg. Book. 55 San Cristobal  
on theDate, first Survey 25<sup>th</sup> AprilLast Survey 30<sup>th</sup> Aug<sup>st</sup> 1906(Number of Visits 19)Gross 2011Net 1965When built 1906Master By whom built Armstrong Whitworth & Co.Engines made at Wallsend By whom made Wallsend Slipway & Co. when made 1906Boilers made at Hebburn By whom made R. Stephenson & Sons Ltd. when made 1906Registered Horse Power 216 Owners Com. Mexicana de Vapores del Aguilon S.A. Port belonging to Vera CruzNom. Horse Power as per Section 28 216 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yesENGINES, &c.—Description of Engines In C.P.D. No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 20 3/4 33 54 Length of Stroke 36 Revs. per minute 40 Dia. of Screw shaft 11 3/4 as per rule 11 3/4 Material of screw shaft 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes If twoliners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 4 ft.Dia. of Tunnel shaft 10 1/2 as per rule 10 1/2 Dia. of Crank shaft journals 11 as per rule 11 Dia. of Crank pin 11 Size of Crank web 22 x 18 Dia. of thrust shaft undercollars 11 Dia. of screw 13 9/16 Pitch of Screw 13 9/16 No. of Blades 4 State whether moveable f Total surface 65 sq.No. of Feed pumps 2 Diameter of ditto 3 Stroke 22 Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 22 Can one be overhauled while the other is at work yesNo. of Donkey Engines 2 Sizes of Pumps 6 x 4 x 6 + 6 x 5 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 4 of 3 In Holds, &c. Copperdams 2 of 5 Ford 2 of 4 aft.No. of Bilge Injections 1 sizes 5 Connected to condenser, or to circulating pump CP Is a separate Donkey Suction fitted in Engine room & size yes 3Are 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 yesAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks bothAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers none How are they protected yesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 14/7 of Stern Tube 14/7 Screw shaft and Propeller 14/7Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door yes worked from yesBOILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer & Sons Ltd.Total Heating Surface of Boilers 3684 Is Forced Draft fitted no No. and Description of Boilers 3 Cyl. Multitub.Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 30<sup>th</sup> April No. of Certificate 7210Can each boiler be worked separately yes Area of fire grate in each boiler 37 sq. No. and Description of Safety Valves toeach boiler 2 Spring Area of each valve 4 9/16 Pressure to which they are adjusted 185 Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 2 feet Mean dia. of boilers 10 1/10 Length 11 6/10 Material of shell plates S.Thickness 1 Range of tensile strength 32 long Are the shell plates welded or flanged ends both Descrip. of riveting: cir. seams 2 butt 4long. seams 2 r lap Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 7 1/8 Lap of plates or width of butt straps 16 3/8Per centages of strength of longitudinal joint 91 1/4 Working pressure of shell by rules 200 lbs Size of manhole in shell 16 x 12Size of compensating ring flanged No. and Description of Furnaces in each boiler 2 Aughts Material S Outside diameter 41Length of plain part top Thickness of plates bottom Description of longitudinal joint weld No. of strengthening rings yesWorking pressure of furnace by the rules 184 Combustion chamber plates: Material S Thickness: Sides 3 1/2 Back 4 1/8 Top 3 1/2 Bottom 1 3/16Pitch of stays to ditto: Sides 9 1/2 x 8 1/2 Back 9 1/2 x 9 Top 9 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 190 lbsMaterial of stays S Diameter at smallest part 1 1/8 Area supported by each stay 85 1/2 Working pressure by rules 216 lbs End plates in steam space:Material S Thickness 1 1/8 Pitch of stays 16 1/8 x 13 1/8 How are stays secured 2 nuts Working pressure by rules 250 Material of stays SDiameter at smallest part 2 1/2 Area supported by each stay 228 Working pressure by rules 220 Material of Front plates at bottom SThickness 1 Material of Lower back plate S Thickness 3 1/2 Greatest pitch of stays 14 Working pressure of plate by rules 200 lbsDiameter of tubes 3 Pitch of tubes 4 1/4 x 4 1/8 Material of tube plates S Thickness: Front 1 Back 3/4 Mean pitch of stays 8 1/2 x 8 1/2Pitch across wide water spaces 13 1/2 Working pressures by rules 210 Girders to Chamber tops: Material S Depth andthickness of girder at centre 8 1/2 x 12 Length as per rule 30 Distance apart 8 1/2 Number and pitch of stays in each 2 of 8 1/2Working pressure by rules 198 1/2 Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler workedseparately yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivetholes Pitch of rivets Working pressure of shell Material of flue plates Thickness How stayedIf stiffened with rings Distance between rings Working pressure by rules End plates: ThicknessWorking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear yes

1910-71117

Lloyd's Register Foundation



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:— 1 set connecting rod bolts & nuts.  
 1 set main bearing bolts & nuts. 1 set coupling bolts & nuts.  
 1 set feed and bilge pump valves. propeller & shaft.  
 nuts bolts and assorted iron.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

Manufacturer.

M. Murray Secy.

Dates of Survey while building { During progress of work in shops - 1906 April 25. May 18. 28. 29. 30. 31. June 15. 21. July 7. 14. 20. 27. 28. 31.  
 { During erection on board vessel - August 9. 11. 24. 30.  
 Total No. of visits nineteen

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 25/4 Slides 25/4 Covers 23/4 Pistons 23/4 Rods 11/5  
 Connecting rods 11/5 Crank shaft 11/5 Thrust shaft 11/5 Tunnel shafts 11/5 Screw shaft 30/5 Propeller 30/5.  
 Stern tube 14/5 30 Steam pipes tested 25/7. Engine and boiler seatings 23/7. Engines holding down bolts 23/7  
 Completion of pumping arrangements 30/7. Boilers fixed 23/7. Engines tried under steam 30/7.  
 Main boiler safety valves adjusted 30/7. Thickness of adjusting washers P. 9 1/2. S. 3. C. B. 1/8 3/8 S. 10 1/8 5/8  
 Material of Crank shaft S Identification Mark on Do. LR J.T.F. 5/06 Material of Thrust shaft S Identification Mark on Do. LR J.T.F. 5/06  
 Material of Tunnel shafts Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. LR J.T.F. 5/06  
 Material of Steam Pipes ~~Steel~~ Copper Test pressure 360

General Remarks (State quality of workmanship, opinions as to class, &c. Machinery and boilers constructed under special survey. Materials and workmanship good. Engines and boilers examined under full steam and found satisfactory. In my opinion this vessel is now eligible for the record of L.M.C. 8/06.

The boilers are fitted to burn liquid fuel with the E. & S. Rusden burners. an evaporator sufficient in size to make water is also fitted. Examined under working conditions found in satisfactory working condition.

Machinery fitted aft.

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 8.06 ELEC. LIGHT. FITTED FOR LIQUID FUEL. 8.06

The amount of Entry Fee.. £ 2 : : When applied for.  
 Special .. £ 30.16 : : 3/9/06  
 Donkey Boiler Fee .. £ : : :  
 Travelling Expenses (if any) £ : : : 4/9/06

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. 7 SEP 1906

Assigned

+ L.M.C. 8.06  
 Fitted for liquid fuel 8.06

MACHINERY CERTIFICATE WRITTEN,



© 2020

Lloyd's Register Foundation