

## REPORT ON MACHINERY.

No. 50872

Port of NewcastleReceived at London Office. 17 MAY 1906

No. in Survey held at Newcastle Date, first Survey Oct 2 Last Survey May 11 1906  
Reg. Book. on the E/S Okehampton (Number of Visits 21)  
Master F. Mogg Built at Newcastle By whom built R. Stephenson & Co. Ltd Tons {Gross 3875  
Engines made at Newcastle By whom made H. E. King & Co. Ltd Net 2531  
Boilers made at " By whom made " When built 1906  
Registered Horse Power 311 Owners Okehampton S. S. Co. Ltd Port belonging to Cardiff  
Nom. Horse Power as per Section 28 311 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted no.

## ENGINES, &amp;c.—Description of Engines

Triplex No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 25" 41" 64" Length of Stroke 45" Revs. per minute 64 Dia. of Screw shaft 13.65" Material of I.  
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' 4"  
Dia. of Tunnel shaft 12" Dia. of Crank shaft journals 12.6" Dia. of Crank pin 12.34" Size of Crank web 24 1/2 x 8 1/2 Dia. of thrust shaft under  
collars 12 3/4" Dia. of screw 14 1/2" Pitch of Screw 14 1/2" No. of Blades 4 State whether moveable f Total surface 88 sq  
No. of Feed pumps 2 Diameter of ditto 3" Stroke 24" Can one be overhauled while the other is at work yes  
No. of Bilge pumps 2 Diameter of ditto 3 3/4" Stroke 24" Can one be overhauled while the other is at work yes  
No. of Donkey Engines 2 Sizes of Pumps 9" x 11 x 10 7/8 6" x 4 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3 of 32" In Holds, &c. no. 2 of 32" 2 of 30"  
No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 4"  
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 none  
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 18/3/06 of Stern Tube 18/3/06 Screw shaft and Propeller 18/3/06  
Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record R)

Manufacturers of Steel Spencer & Sons Ltd  
Total Heating Surface of Boilers 4760 Is Forced Draft fitted no No. and Description of Boilers 2 S.S. Mul  
Working Pressure 165 lbs Tested by hydraulic pressure to 330 lbs Date of test 30.3.06 No. of Certificate 7197  
Can each boiler be worked separately yes Area of fire grate in each boiler 60.6 sq No. and Description of Safety Valves to  
each boiler 2 Spring Area of each valve 8.29 Pressure to which they are adjusted 140 lbs Are they fitted with easing gear yes  
Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15' 6 3/8" Length 10' 6" Material of shell plates S  
Thickness 1 7/16 Range of tensile strength 28 1/2 532 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams 2 x lap  
long. seams 2 butt Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/4 Lap of plates or width of butt straps 19 1/2"  
Per centages of strength of longitudinal joint 90.9 Working pressure of shell by rules 194 lbs Size of manhole in shell ends 16 x 12"  
Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Mor Material S Outside diameter 4' 2 1/2"  
Length of plain part top 19" Thickness of plates bottom 32" Description of longitudinal joint weld No. of strengthening rings yes  
Working pressure of furnace by the rules 186 Combustion chamber plates: Material S Thickness: Sides 32 Back 32 Top 32 Bottom 1"  
Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 190  
Material of stays I Diameter at smallest part 1.48 Area supported by each stay 64 Working pressure by rules 209 End plates in steam space:  
Material S Thickness 1" Pitch of stays 16 x 16" How are stays secured d nuts Working pressure by rules 185 Material of stays S  
Diameter at smallest part 5.05 Area supported by each stay 256 Working pressure by rules 194 Material of Front plates at bottom S  
Thickness 3 1/2 Material of Lower back plate S Thickness 8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 193 1/2  
Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates S Thickness: Front 3 1/2 Back 3 1/4 Mean pitch of stays 8.84"  
Pitch across wide water spaces 14 1/2 Working pressures by rules 182 1/4 Girders to Chamber tops: Material S Depth and  
thickness of girder at centre 4 7/8 x 2 1/2 Length as per rule 28.5 Distance apart 8" Number and pitch of stays in each 2 of 8"  
Working pressure by rules 183 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 2020 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

1500-0053

VERTICAL DONKEY BOILER—

Manufacturers of Steel

See attached report.

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 top and bottom end bolts and nuts, two main bearing bolts & nuts. 1 Set coupling bolts & nuts. 1 Set feed & helge pump valves, propellers & shaft. Nuts bolts and iron assorted.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

*J. Harrison*  
 Dates of Survey \_\_\_\_\_  
 During progress of work in shops— \_\_\_\_\_ ASSIST. SECRETARY.  
 During erection on board vessel— \_\_\_\_\_ 1905. Oct. 2. Nov. 2. 15. 29. Dec. 13. 1906. Jan. 16. 24. 25. Feb. 12. 15. 22. 29. April 10.  
 building \_\_\_\_\_  
 Total No. of visits \_\_\_\_\_ 21  
 Is the approved plan of main boiler forwarded herewith \_\_\_\_\_ Yes

Dates of Examination of principal parts—Cylinders 21-1-06 Slides 21-1-06 Covers 21-1-06 Pistons 21-1-06 Rods 21-1-06  
 Connecting rods 21-1-06 Crank shaft 8/2/06 Thrust shaft 8/2/06 Tunnel shafts 8/3/06 Screw shaft 9/4/06 Propeller 9/4/06  
 Stern tube 9/4 Steam pipes tested 2/06. Engine and boiler seatings 26-4-06 Engines holding down bolts 24-4-06.  
 Completion of pumping arrangements 1/5/06 Boilers fixed 26-24-06 Engines tried under steam 2/5/06.  
 Main boiler safety valves adjusted 2/5/06. Thickness of adjusting washers 3-9/16 3-7/16  
 Material of Crank shaft S Identification Mark on Do. AH 1/06 Material of Thrust shaft S Identification Mark on Do. AH. 2/06  
 Material of Tunnel shafts S Identification Marks on Do. AH. 2/06 Material of Screw shafts S Identification Marks on Do. L. M. 4/06  
 Material of Steam Pipes Steel. Test pressure. 330 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boilers have been built under special survey. Materials and workmanship good. Engines and boilers examined under full steam & found satisfactory. In my opinion this vessel is now eligible for the record of L. M. C. 5/06.

It is submitted that this vessel is eligible for THE RECORD

L. M. C. 5.06.

*Paul*  
 17.5.06 17.5.06

The amount of Entry Fee. £ 3 : : : When applied for. 1.6 MAY 1906  
 Special £ 35 : 11 : :  
 Donkey Boiler Fee £ : : : :  
 Travelling Expenses (if any) £ : : : :  
 When received. 18.5.06

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

Committee's Minute

FRI. 18 MAY 1906

Assigned

MACHINERY CERTIFICATE WRITTEN.



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