

REPORT ON MACHINERY.

No. 50872

Port of Newcastle

Received 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)

Tons Gross 3875

Net 2531

When built 1906

Master F. Mogg

Built at Newcastle

By whom built R. Stephenson & Co. Ltd

when made 1906

Engines made at Newcastle

By whom made H. E. King & Co. Ltd

when made 1906

Boilers made at "

By whom made "

when made 1906

Registered Horse Power

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, &c.—Description of Engines

Triple

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 screw shaft St. 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 no. 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 no. If two liners are fitted, is the shaft lapped or protected between the liners no. Length of stern bush 5' 4"

Dia. of Tunnel shaft 12" as per rule 12" Dia. of Crank shaft journals 12.6" as per rule 12.6" Dia. of Crank pin 12.3/4" 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 1/2" 6" x 4 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 3 1/2" In Holds, &c. no. 2 of 3 1/2" no. 2 of 3 1/2"

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump no 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 no

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 pl. platform

BOILERS, &c.—(Letter for record B) 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 1/4 to 53.2 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams 2 wrap

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 rivets 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 no

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 S 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 3/2 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 3/2 Back 3/4 Mean pitch of stays 8.8 1/2"

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 7 1/8 x 1 1/2 Length as per rule 28.5 Distance apart 8" Number and pitch of stays in each 2 of 8"

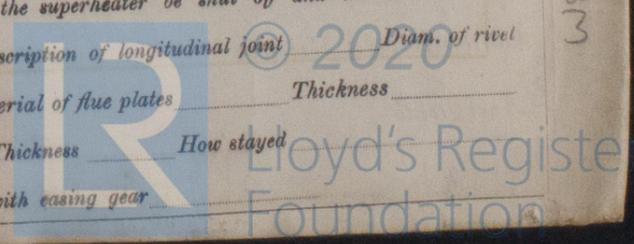
Working pressure by rules 183 Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no

Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

If stiffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

1500-0083



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, propeller & shaft. Tube bolts and iron assorted.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD. Manufacturer.

J. Harrison
 ASSISTANT SECRETARY.
 Dates of Survey while building: During progress of work in shops - 1905. Oct. 2, Nov. 2, 15, 29, Dec. 13, 1906. Jan. 16, 24, 25, Feb. 12, 5, 12, 21, 29, April 10.
 During erection on board vessel - 20, 26, 27, May. 13, 14.
 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 26-27-4 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 1/06 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 H.L.M.C. 5/06.

It is submitted that this vessel is eligible for THE RECORD H.L.M.C. 5.06.

H.S. 17.5.06
17.5.06

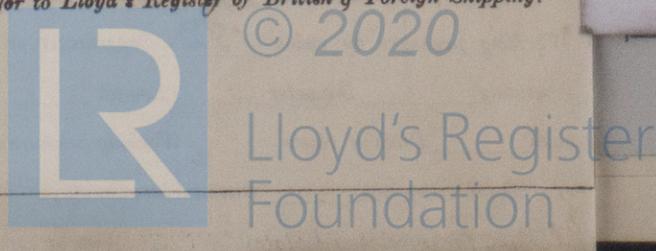
The amount of Entry Fee. £ 3
 Special £ 35 11
 Donkey Boiler Fee £
 Travelling Expenses (if any) £

When applied for. 16 MAY 1906
 When received. 18 MAY 1906

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

Committee's Minute FRI. 18 MAY 1906
 Assigned *H.M.C. 5.06*

MACHINERY CERTIFICATE WRITTEN.



Certificate (if required) to be sent to Surveyors on - Type.

It is to give