

## REPORT ON MACHINERY.

No. 55700

Port of Newcastle

Received at London Office

1908 NOV 12

No. in Survey held at Newcastle Date, first Survey Nov 18 Last Survey 4 Nov 1908  
 Reg. Book. 1/5 "Engineer" (Number of Visits 20)  
 on the 1/5 "Engineer" Tons 588  
 Master W. Lewellyn Built at Newcastle By whom built Shawn Hunter & Co. Ltd. No. 1797  
 Engines made at Newcastle By whom made H. & M. Eng. Co. Ltd. When built 1908  
 Boilers made at " By whom made " when made 1908  
 Registered Horse Power " Owners J. of Harrison Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 491 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted yes

ENGINES, &c.—Description of Engines In Cpd.No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 25.41.68 Length of Stroke 54 Revs. per minute 67 Dia. of Screw shaft as per rule 14.8 Material of IS  
 as fitted 152 screw shaft

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 ✓ 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 ✓ If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 5' 8 1/2"

Dia. of Tunnel shaft as per rule 13.48 Dia. of Crank shaft journals as per rule 14.15 Dia. of Crank pin 15" Size of Crank webs 98 x 2 1/2 Dia. of thrust shaft under

collars 14 1/2 Dia. of screw 17.6 Pitch of Screw 18' 6" No. of Blades 4 State whether moveable N. Total surface 93 sq.

No. of Feed pumps 2 Diameter of ditto 4 Stroke 26 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work yes

No. of Donkey Engines 5 Sizes of Pumps 9x10x10; 5x5x6; 8x10x18 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room two: 4 1/2; four: 3 1/2; one: 3 In Holds, &c. two of 3 1/2 in each hold; A Hold

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 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 ✓

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 ✓

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 21.9.08 of Stern Tube 25.9.08 Screw shaft and Propeller 25.9.08

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record S)Manufacturers of Steel J. Spencer & Sons. Ltd.

Total Heating Surface of Boilers 7814 sq. ft. Is Forced Draft fitted no No. and Description of Boilers (two main) & one Auxiliary

Working Pressure 190 Tested by hydraulic pressure to 380 Date of test 15.5.08 No. of Certificate 7714

Can each boiler be worked separately yes Area of fire grate in each boiler 115 sq. ft. No. and Description of Safety Valves to

each boiler 4.9 = 3 Spring Area of each valve 4.9 sq. ft. Pressure to which they are adjusted 195 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 22" Mean dia. of boilers 15.53 Length 17.5 Material of shell plates S.

Thickness 1 1/2 Range of tensile strength 283.33 Are the shell plates welded or flanged ends ends Descrip. of riveting: cir. seams 2.77 riv.

long. seams 2. butts Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 10 Lap of plates or width of butt straps 21 1/2

Per centages of strength of longitudinal joint 91.4 Working pressure of shell by rules 220 Size of manhole in shell 16 x 12

Size of compensating ring 2.4 No. and Description of Furnaces in each boiler 36 Monitors Material S. Outside diameter 3.82

Length of plain part top 19 1/2 Thickness of plates bottom 19 1/2 Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 212 Combustion chamber plates: Material S. Thickness: Sides 3/4 Back ✓ Top 3/4 Bottom 1"

Pitch of stays to ditto: Sides 10 1/2 x 9 Back ✓ Top 10 1/2 x 9 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 203

Material of stays S Diameter at smallest part 2.03 Area supported by each stay 94 1/2 Working pressure by rules 193 End plates in steam space:

Material S Thickness 1 1/2 Pitch of stays 23.14 1/2 How are stays secured 2 nuts Working pressure by rules 197 Material of stays S

Diameter at smallest part 8.48 Area supported by each stay 399 1/2 Working pressure by rules 220 Material of Front plates at bottom S

Thickness 1 Material of Lower back plate ✓ Thickness ✓ Greatest pitch of stays ✓ Working pressure of plate by rules ✓

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates S Thickness: Front 1" Back 25/32 Mean pitch of stays 9 1/4

Pitch across wide water spaces 14 1/2 Working pressures by rules 194 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 10 1/2 x 2 1/2 Length as per rule 39 Distance apart 10 1/2 Number and pitch of stays in each 3 @ 9"

Working pressure by rules 190 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 2021 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 ✓

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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 and nuts; 1 Set Coupling bolts & nuts; 1 Set main bearing bolts & nuts; feed & bilge pump valves; propeller shaft; propeller; nuts & bolts, &c.

The foregoing is a correct description,  
 NORTH EASTERN MARINE ENGINEERING CO., LTD.

Secretary. \_\_\_\_\_  
 Dates of Survey while building { During progress of work in shops - - - - -  
 { During erection on board vessel - - - - -  
 Total No. of visits 36

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_  
 " " " donkey " " " \_\_\_\_\_

Dates of Examination of principal parts—Cylinders 17.2.08. Slides 14.2.08. Covers 24.2.08. Pistons 24.2.08. Rods 21.9.08  
 Connecting rods 21.9.08. Crank shaft 21.9.08. Thrust shaft 21.9.08. Tunnel shafts 25.9.08. Screw shaft 25.9.08. Propeller 25.9.08  
 Stern tube 25.9.08. Steam pipes tested 24.3.08. Engine and boiler seatings 2.10.08. Engines holding down bolts 19.10.08  
 Completion of pumping arrangements 19.10.08. Boilers fixed 19.10.08. Engines tried under steam 19.10.08  
 Main boiler safety valves adjusted 19.10.08. Thickness of adjusting washers PBp2.32. SBp32. S32. Am 1/16 S2  
 Material of Crank shaft I. Identification Mark on Do. B.J.T.F. Material of Thrust shaft I. Identification Mark on Do. B.J.T.F.  
 Material of Tunnel shafts I. Identification Marks on Do. B.J.T.F. Material of Screw shafts H.S. Identification Marks on Do. B.J.T.F.  
 Material of Steam Pipes M.I. Test pressure 24 1/2 March 1908 570 lb.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boilers of this vessel have been constructed under Special Survey. Materials and workmanship good. Engines and boilers examined under full steam & found satisfactory. It is submitted that this vessel is eligible for the record of L.M.C 11.08

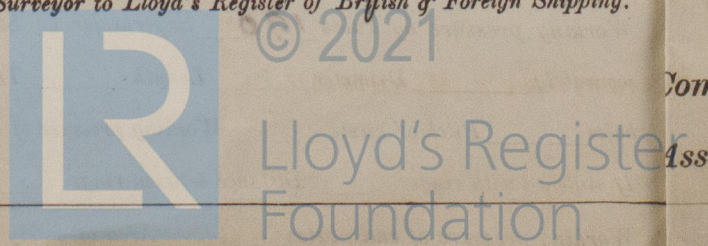
It is submitted that this vessel is eligible for THE RECORD. + L.M.C 11.08 electric Light.

J. Y. Findlay  
 13.11.08 13/11/08

The amount of Entry Fee. £ 3 : : :  
 Special £ 44 : 11 : :  
 Donkey Boiler Fee £ : : :  
 Travelling Expenses (if any) £ : : :  
 When applied for, 11 NOV 1908  
 When received, 24.11.08

Committee's Minute TUES. 17 NOV 1908  
 Assigned L.M.C 11.08 electric light.

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



MACHINERY CERTIFICATE WRITTEN.