

REPORT ON MACHINERY.

Port of Newcastle-on-Tyne

SAI. 17 MAY 1902

No. in Survey held at Newcastle

Date, first Survey Dec 13 '01 Last Survey May 9 1902

Reg. Book. 5/5 "Paris"

(Number of Visits 18)

Tons { Gross 1229
Net 633

Master G. W. Young Built at Newcastle

By whom built Wood Skinner & Co

When built 1902

Engines made at Newcastle

By whom made North Eastern Marine Eng. Co when made 1902

Boilers made at Newcastle

By whom made North Eastern Marine Eng. Co when made 1902

Registered Horse Power

Owners J. Strick & Co Ltd

Port belonging to Sunderland

Nom. Horse Power as per Section 28 196 201

Is Refrigerating Machinery fitted no

Is Electric Light fitted no

ENGINES, &c.—Description of Engines Trip

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 21" 34" 56" Length of Stroke 36" Revs. per minute 70 Dia. of Screw shaft 11.5" Lgth. of stern bush 4.3"

Dia. of Tunnel shaft 9.81" Dia. of Crank shaft journals 10.3" Dia. of Crank pin 10.5" Size of Crank webs 20.5" x 16.5" Dia. of thrust shaft under collars 10.5" Dia. of screw 13-10" Pitch of screw 16-0" No. of blades 4 State whether moceable no Total surface 61.9

No. of Feed pumps 2 Diameter of ditto 3.5" Stroke 18" Can one be overhauled while the other is at work no

No. of Bilge pumps 2 Diameter of ditto 3.5" Stroke 18" Can one be overhauled while the other is at work no

No. of Donkey Engines 2 Sizes of Pumps 7.5" x 8.5" x 8" x 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four 3" In Holds, &c. Two in fore hold 3" one in after

No. of bilge injections 1 sizes 4" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size no 3"

Are all the bilge suction pipes fitted with roses no Are the roses in Engine room always accessible no Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship no Are they Valves or Cocks Both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no 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 no Are the blow off cocks fitted with a spigot and brass covering plate no

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 no

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges no

When were stern tube, propeller, screw shaft, and all connections examined in dry dock no Is the screw shaft tunnel watertight no

Is it fitted with a watertight door no worked from upper platform

BOILERS, &c.— (Letter for record 5) Total Heating Surface of Boilers 2564.5 Is forced draft fitted no

No. and Description of Boilers one Smith End Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs

Date of test 26/3/02 Can each boiler be worked separately ✓ Area of fire grate in each boiler 60.5 No. and Description of safety valves to each boiler two, spring Area of each valve 11.04 Pressure to which they are adjusted 165 lbs Are they fitted with easing gear no

Smallest distance between boilers or uptakes and bunkers or woodwork no bunkers in way of boiler Mean dia. of boilers 14-9.5" Length 11-6" Material of shell plates S

Thickness 1.32" Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams lap length long. seams d.b. d. no.

Diameter of rivet holes in long. seams 1.76" Pitch of rivets 8.5" Lap of plates or width of butt straps 15.5"

Per centages of strength of longitudinal joint rivets 81.5 Working pressure of shell by rules 160 Size of manhole in shell 16 x 12"

Size of compensating ring flanged in No. and Description of Furnaces in each boiler 3 Furnaces Material S Outside diameter 44.5"

Length of plain part top Thickness of plates bottom 3.33" Description of longitudinal joint welded No. of strengthening rings ✓

Working pressure of furnace by the rules 162 Combustion chamber plates: Material S Thickness: Sides 1/8" Back 1/8" Top 1/8" Bottom 3/8"

Pitch of stays to ditto: Sides 10 x 10 Back 9 x 10 Top 10 x 10 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 163

Material of stays S Diameter at smallest part 1.5" Area supported by each stay 100" Working pressure by rules 161 End plates in steam space:

Material S Thickness 1.76" Pitch of stays 25.5" x 23.5" How are stays secured d.n. & w. Working pressure by rules 161 Material of stays S

Diameter at smallest part 3.5" Area supported by each stay 605" Working pressure by rules 162 Material of Front plates at bottom S

Thickness 3/8" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 14.5" Working pressure of plate by rules 164

Diameter of tubes 2.5" Pitch of tubes 3.5" x 3.5" Material of tube plates S Thickness: Front 3/8" Back 3/4" Mean pitch of stays 7.5"

Pitch across wide water spaces 14.5" Working pressures by rules 240 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8" x 1.5" Length as per rule 29" Distance apart 10" Number and pitch of Stays in each 2, 10"

Working pressure by rules 172 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately ✓

Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ 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 ✓



WS02-0025

DONKEY BOILER— No. *one* Description *Vertical, cross tubes*
 Made at *Stockton* By whom made *Sudron & Co* When made *28/2/02* Where fixed *Stockton*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *2700* Fire grate area *172.5* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *46.1* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Dia. of donkey boiler *5'-6"* Length *9'-0"* Material of shell plates *S* Thickness *3/8"* Range of tensile strength *27-32* Descrip. of riveting long seams *Lap double* Dia. of rivet holes *13/16"* Whether punched or drilled *punched* Pitch of rivets *2 3/4"*
 Lap of plating *4 1/2"* Per centage of strength of joint *84* Rivets *84* Thickness of shell crown plates *1/2"* Radius of do. *5'-0"* No. of stays to do. *5*
 Dia. of stays *1 1/8"* Diameter of furnace Top *4-5 1/2"* Bottom *4-10"* Length of furnace *4-6"* Thickness of furnace plates *3/16"* Description of joint *Lap single* Thickness of furnace crown plates *1/2"* Stayed by *as shell crown* Working pressure of shell by rules *83*
 Working pressure of furnace by rules *100 lbs* Diameter of uptake *12"* Thickness of uptake plates *3/8"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *Two top end & two bottom end con. nut bolts and nuts, two main bearing bolts, one set coupling bolts, one set fuel & bilge pump valves assorted bolts & nuts, Iron of various sizes.*

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. LD. Manufacturer.

J. J. Harrison
 Dates of Survey: During progress of work in shops—
 while building—
 Total No. of visits *18*
 1901 Dec. 13, 14. 1902 Jan. 9, 13, 21, 24, 28. Feb. 5, 12, 17. Mch. 3, 10, 20, 26. Apr. 9, 17, 18.
 Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *No*

General Remarks (State quality of workmanship, opinions as to class, &c.)

Material of screw shaft *Iron* 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—

The machinery of this vessel has been constructed under special survey, the materials and workmanship are sound and good and under the vessel clings in my opinion to have record of L.M.C. 5.02.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5.02. FD.
Yes
 20.5.02
 C.M.
 20.5.02

The amount of Entry Fee. £ 2 : : : When applied for,
 Special £ 29 8 : : : 16 MAY 1902
 Donkey Boiler Fee £ : : : When received
 Travelling Expenses (if any) £ : : : 23.15.10

B. G. A. Stuke
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUES, 20 MAY 1902
 Assigned + L.M.C. 5.02
 MACHINERY CERTIFICATE F. D.
 WRITTEN.



Newcastle-on-Tyne.

Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)