

REPORT ON MACHINERY.

Port of *Newcastle-on-Tyne*

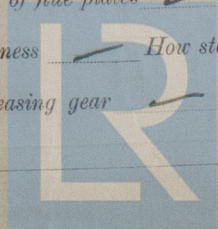
Received at London Office

No. in Survey held at *Newcastle* Date, first Survey *8th May 01* Last Survey *23rd Jan 1902*
 Reg. Book. *9/5 'Tigris'* (Number of Visits *23*) Tons { Gross *2805* Net *1792*
 Master *Lee* Built at *Newcastle* By whom built *Armstrong Whitworth & 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 *Bucknall Bros.* Port belonging to *London*
 Nom. Horse Power as per Section 28 *279* Is Refrigerating Machinery fitted *no* Is Electric Light fitted *yes*

ENGINES, &c.—Description of Engines *Trip* No. of Cylinders *3* No. of Cranks *3*
 Dia. of Cylinders *22 1/2" 36 1/2" 61"* Length of Stroke *42"* Revs. per minute *70* Dia. of Screw shaft as per rule *13 1/2"* Lgth. of stern bush *4'-9"*
 Dia. of Tunnel shaft as per rule *11 1/2"* Dia. of Crank shaft journals as per rule *12"* Dia. of Crank pin *12"* Size of Crank webs *23 1/2" x 7 1/2"* Dia. of thrust shaft under collars *12"* Dia. of screw *15-6"* Pitch of screw *15-6"* No. of blades *4* State whether moveable *yes* Total surface *74 1/2"*
 No. of Feed pumps *2* Diameter of ditto *4"* Stroke *22"* Can one be overhauled while the other is at work *yes*
 No. of Bilge pumps *2* Diameter of ditto *3 1/2"* Stroke *22"* Can one be overhauled while the other is at work *yes*
 No. of Donkey Engines *3* Sizes of Pumps *6 x 4 x 6, 6 x 5 1/2 x 6, 9 x 10 x 9* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *Four 3" + one 3 1/2"* In Holds, &c. *Two in each hold 3" one in after hull 3 1/2"*
 No. of bilge injections *1* sizes *6"* Connected to condenser to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes 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 *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*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *22/1/02* Is the screw shaft tunnel watertight *yes*
 Is it fitted with a watertight door *yes* worked from *Upper Platform*

BOILERS, &c.—(Letter for record *2*) Total Heating Surface of Boilers *3810 1/2* Is forced draft fitted *yes*
 No. and Description of Boilers *3 Single Ended Mult.* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*
 Date of test *25/11/01* Can each boiler be worked separately *yes* Area of fire grate in each boiler *23 1/2* No. and Description of safety valves to each boiler *Two Spring* Area of each valve *4.9 1/2"* Pressure to which they are adjusted *163 lbs* Are they fitted with easing gear *yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *Way of Bricks* Mean dia. of boilers *11'-4 1/2"* Length *11'-0"* Material of shell plates *S*
 Thickness *7/8"* Range of tensile strength *29-32* Are they welded or flanged *no* Descrip. of riveting: cir. seams *Lap joints* long. seams *A. butt. A. riv.*
 Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *6 1/4"* *Lap joints* width of butt straps *11 1/2"*
 Per centages of strength of longitudinal joint rivets *81* Working pressure of shell by rules *163* Size of manhole in *End* *16 x 12*
Compensating ring flanged in No. and Description of Furnaces in each boiler *2 Plain* Material *S* Outside diameter *41"*
 Length of plain part top *6'-9"* Thickness of plates crown *3 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *yes*
 bottom *6'-6"* bottom *3 1/2"* Working pressure of furnace by rules *164* Combustion chamber plates: Material *S* Thickness: Sides *1/8"* Back *1/8"* Top *1/8"* Bottom *1/8"*
 Pitch of stays to ditto: Sides *10" x 9 1/2"* Back *10" x 9 1/2"* Top *10" x 9 1/2"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *172*
 Material of stays *Iron* Diameter at smallest part *1 5/8"* Area supported by each stay *97.5 1/2"* Working pressure by rules *160* End plates in steam space:
 Material *S* Thickness *1 1/2"* Pitch of stays *24" x 18 1/2"* How are stays secured *A. n. & W.* Working pressure by rules *161* Material of stays *S*
 Diameter at smallest part *3 1/2"* Area supported by each stay *450 1/2"* Working pressure by rules *167* Material of Front plates at bottom *S*
 Thickness *7/8"* Material of Lower back plate *S* Thickness *3/4"* Greatest pitch of stays *14 1/2" x 10 1/2"* Working pressure of plate by rules *164*
 Diameter of tubes *2 1/2"* Pitch of tubes *32" x 3 1/2"* Material of tube plates *S* Thickness: Front *7/8"* Back *3/4"* Mean pitch of stays *7 5/8"*
 Pitch across wide water spaces *14 1/2" x 10 1/2"* Working pressures by rules *216* Girders to Chamber tops: Material *S* Depth and thickness of girder at centre *8 1/4" x 1 1/2"* Length as per rule *30"* Distance apart *10"* Number and pitch of Stays in each *2.9 1/2"*
 Working pressure by rules *164* Superheater or Steam chest; how connected to boiler *yes* Can the superheater be shut off and the boiler worked separately *yes* Diameter *yes* Length *yes* Thickness of shell plates *yes* Material *yes* Description of longitudinal joint *yes* Diam. of rivet holes *yes* Pitch of rivets *yes* Working pressure of shell by rules *yes* Diameter of flue *yes* Material of flue plates *yes* Thickness *yes*
 If stiffened with rings *yes* Distance between rings *yes* Working pressure by rules *yes* End plates: Thickness *yes* How stayed *yes*
 Working pressure of end plates *yes* Area of safety valves to superheater *yes* Are they fitted with easing gear *yes*

W/646-0171



© 2021

Lloyd's Register Foundation

DONKEY BOILER—

None.

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ 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 _____ 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 _____

Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____

Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied:— Two top & two bottom end bolts, two main bearing bolts, one set coupling bolts, one set fuel & bilge pump valves, two sets piston springs, one propeller shaft, two propeller blades, assorted bolts & nuts. Iron of various sizes.

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

Dates of Survey while building { During progress of work in shops { 1901. May 1. June 3. 7. July 9. 1923. Aug. 2. 12. Sept. 6. 12. 26. Nov. 18. 21. 27. 28.
During erection on board vessel { Dec. 14. 20. 23. 24. 1902. Jan. 16. 20. 23
Total No. of visits 23

Is the approved plan of main boiler forwarded herewith ☒ No

" " " donkey " " " ☒ Yes

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 No

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 Yes If two liners are fitted, is the shaft lapped or protected between the liners Yes

The machinery of this vessel has been constructed under special survey the materials and workmanship are sound and good and under the vessel ship in our opinion to have record of L.M.C. 1.02.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 1.02 FD Elec. light.

CM.

28.1.02

29.1.02

The amount of Entry Fee. £ 2 : : : When applied for, 27 JAN 1902
Special £ 33 : 19 : :
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : : When received, 31.1.1902

Committee's Minute

FRI. JAN 31 1902

Assigned

+ L.M.C. 1.02 + D



© 2021

Lloyd's Register Foundation

Certificate (if required) to be sent to Newcastle-on-Tyne.

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