

REPORT ON MACHINERY.

No. 48051

Port of Newcastle.

No. in Survey held at Newcastle. Date, first Survey July 25. Last Survey Dec 7 1904
 Reg. Book. 5/3 on the S/S. Filippo Artelli (Number of Visits 37)
 Master A. B. Radonicic Built at Newcastle By whom built Northumberland S.S. Co. Ltd Tons { Gross 5834 Net 3832 When built 1904
 Engines made at Newcastle. By whom made H. E. M. Eng Co Ltd when made 1904
 Boilers made at " By whom made " when made 1904
 Registered Horse Power 458 Owners J. Lipcovich Port belonging to Livorno
 Nom. Horse Power as per Section 28 458 Is Refrigerating Machinery fitted for cargo purposes no. Is Electric Light fitted yes.

ENGINES, &c.—Description of Engines In C.P.D. No. of Cylinders 3 No. of Cranks 3
 Cylinders 27" 45" 74" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft as per rule 14.9" Material of Iron
 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
 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
 the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two
 are fitted, is the shaft lapped for protected between the liners ✓ Length of stern bush 5' 3"
 Tunnel shaft as per rule 1.178" Dia. of Crank shaft journals as per rule 1.2" Dia. of Crank pin 1.22" Size of Crank webs 14 3/4" x 9 1/2" Dia. of thrust shaft under
1.25" Dia. of screw 18 1/2" Pitch of screw 17' 6" No. of blades 4 State whether moveable f Total surface 100 sq
 Feed pumps 2 Diameter of ditto 4 Stroke 26" Can one be overhauled while the other is at work yes
 Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 26 Can one be overhauled while the other is at work yes
 Donkey Engines 2 Sizes of Pumps 10x12" x 10 1/2 x 5" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3 of 3 1/2 In Holds, &c. 2 of 3 1/2' beach cargo hold
 Incl 2 1/2
 Bilge injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate donkey suction fitted in Engine room & size 3 1/2"
 Are 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 ✓
 connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both.
 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
 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
 pipes are carried through the bunkers none How are they protected ✓
 pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yes
 bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yes.
 Are stern tube, propeller, screw shaft, and all connections examined in dry dock new vessel. Is the screw shaft tunnel watertight yes
 and with a watertight door yes. worked from top platform

BOILERS, &c.— (Letter for record S.) Total Heating Surface of Boilers 7713 sq Is forced draft fitted no.
 Description of Boilers 3 Marine type S.S. Working Pressure 180 Tested by hydraulic pressure to 360 lbs
 test 2-11-04 Can each boiler be worked separately yes. Area of fire grate in each boiler 72.6 sq No. and Description of safety valves to
 boiler 2 Spring Area of each valve 8.29 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 distance between boilers or uptakes and bunkers or woodwork 2 feet. Mean dia. of boilers 16 ft. Length 11 ft. Material of shell plates S
 as 1 1/4 Range of tensile strength 39 Are they welded or flanged ends Descrip. of riveting: cir. seams ∩ riv lap long. seams ∩ butt Straps
 or of rivet holes in long. seams 1 9/32" Pitch of rivets 8 1/16" Lap of plates on width of butt straps 18 1/2"
 stages of strength of longitudinal joint rivets 85.6 Working pressure of shell by rules 183 1/2 Size of manhole in shell 16 x 12"
 plate 85.6
 compensating ring flanged No. and Description of Furnaces in each boiler 4 Deighn Material S Outside diameter 3' 5 1/2"
 of plain part top ✓ Thickness of plates crown 7 1/2 Description of longitudinal joint weld. No. of strengthening rings —
 bottom ✓
 Working pressure of furnace by the rules 182. Combustion chamber plates: Material S Thickness: Sides 1/16 Back 1/16 Top 1/16 Bottom 23/32
 stays to ditto: Sides 9 1/2 x 9 3/8 Back 9 1/2 x 9 3/8 Top 9 1/2 x 9 3/8 If stays are fitted with nuts or riveted heads nuts. Working pressure by rules 180.
 Diameter at smallest part 1.78 Area supported by each stay 89 sq Working pressure by rules 180 End plates in steam space:
 Thickness 1 1/16 Pitch of stays 23 7/8 x 23 How are stays secured ∩ nuts Working pressure by rules 180 lbs Material of stays S
 at smallest part 9.8 Area supported by each stay 542.15 Working pressure by rules 180 Material of Front plates at bottom S
 Thickness 3 1/16 Material of Lower back plate S Thickness 15/16 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 202
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 3/8 Material of tube plates S Thickness: Front 3 1/32 Back 1/8 Mean pitch of stays 8.87
 across wide water spaces 1 1/2 Working pressures by rules 182. Girders to Chamber tops: Material S Depth and
 thickness of girder at centre 8 1/2 x 1 1/2 Length as per rule 30" Distance apart 9 3/8" Number and pitch of Stays in each 2 of 9 1/2
 Working pressure by rules 180. Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked
 safely ✓
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet
 Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 strengthened 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

DONKEY BOILER— No. *1* Description *Hor. Multitubular*
 Made at *Gateshead* By whom made *C. C. & Co. Ltd.* When made *1904* Where fixed *Main deck*
 Working pressure *80* tested by hydraulic pressure to *160*. No. of Certificate *6574*. Fire grate area *270* Description of safety valves *Spring*
 No. of safety valves *2*. Area of each *7.07* Pressure to which they were adjusted *80 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *11' 6"* Length *10' 0"* Material of shell plates *S* Thickness *19/32* Range of tensile strength *37* Descrip. of riveting long. seams *Double Rivet Lap* Dia. of rivet holes *1 1/16* Whether punched or drilled *D* Pitch of rivets *4 1/16*
 Lap of plating *6 1/16* Per centage of strength of joint *84.7* Thickness of shell *iron* plates *1/8* Radius of do. *does* Stays to do. *2*
 (total) stays. *20 1/2 x 18 1/2* Diameter of furnace *3 5/8* Bottom *✓* Length of furnace *6' 8"* Thickness of furnace plates *9/16* Description of joint *Lap*. Thickness of furnace *iron* plates *15/32* Stayed by *1 5/8* Stays @ *82 x 10"* Working pressure of shell by rules *85 lbs*
 Working pressure of furnace by rules *100 lbs*. Diameter of *uptake* tubes *3 1/4* Thickness of *uptake* plates *5/8 + 1/16* Thickness of water tubes *Stay 1/4"*

SPARE GEAR. State the articles supplied:— *1 set connecting rod bolts & nuts. 2 main bearing bolts & nuts. 1 set coupling bolts & nuts. 1 set feed and bilge pump valves. Propeller & shaft nuts & bolts and assorted iron.*

The foregoing is a correct description,

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

J. J. Harrison
 ASSISTANT SECRETARY.
 Dates of Survey while building: During progress of work in shops— *1904 July 28 27 29 Aug 22 23 26 31 Sep 6 8 13 14 15 20 21 30 Oct 4 13 19 21 25 26 29 31 Nov*
 During erection on board vessel— *1 2 4 9 10 11 14 15 16 18 21 29 Dec 2 7*
 Total No. of visits *37* Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " *yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *Machinery and boilers constructed under Special survey. Materials and workmanship good. Engines examined under full working conditions & found satisfactory. In my opinion this vessel is now eligible for the record in the Register Book of L.M.C. 12/04*

It is submitted that this vessel is eligible for THE RECORD L.M.C. 12.04 ELEC:LIGHT.
Pub.
22.12.04
22.12.04

Newcastle-on-Tyne

Certificate (if required) to be sent to

The amount of Entry Fee.. £ *3* : : : When applied for,
 Special £ *42 18* : : : *20 DEC 1904*
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : : *30/17/0*

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

Committee's Minute *WED, 28 DEC 1904*
 Assigned *+ L.M.C. 12.04. Elec light*

MACHINERY CERTIFICATE WRITTEN.

