

REPORT ON MACHINERY.

24119

MON 5 MAY 1890

Port of *Newcastle-on-Tyne*

Received at London Office

No. *24119*

No. in Survey held at *South Shields*

Date, first Survey *Dec 1889*

Last Survey *20 April 1890*

1890

Reg. Book.

(Number of Visits *1*)

Tons *1570*

on the *S.S. Tresillian*

Master *Gyles*

Built at *South Shields* By whom built *Readhead & Sons*

When built *1890*

Engines made at *South Shields*

By whom made *Readhead & Sons*

when made *1890*

Boilers made at *Do*

By whom made *Do*

when made *1890*

Registered Horse Power *250*

Owners *Edwin & Son*

Port belonging to *S.S. Co*

ENGINES, &c.—

(Triple expansion)

Description of Engines *Triple expansion, air condensing*

Diameter of Cylinders *23.37 1/2, 6 1/2* Length of Stroke *39* No. of Rev. per minute *60* Point of Cut off, High Pressure *6* Low Pressure *5*

Diameter of Screw shaft *1 1/2* Diam. of Tunnel shaft *1 1/2* Diam. of Crank shaft journals *1 1/2* Diam. of Crank pin *1 1/2* size of Crank webs *13 1/2 x 8*

Diameter of screw *15-0* Pitch of screw *15-6 to 18-6* No. of blades *4* state whether moveable *no* total surface *57 1/4*

No. of Feed pumps *2* diameter of ditto *2 1/2* Stroke *20* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *3 3/4* Stroke *20* Can one be overhauled while the other is at work *yes*

Where do they pump from *(port pump) Tanks, Forehold Eng. bilges (1), (Star pump) Eng. bilges (2) - after well*

No. of Donkey Engines *2* Size of Pumps *13 1/2 x 9 x 10 & 5 1/4 x 3 1/2 x 5* Where do they pump from *B Don. Tanks, Holds,*

Engine bilges after well & sea, Fed Don. means B D & from hot well

Are all the bilge suction pipes fitted with roses *yes* Are the roses always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*

No. of bilge injections *1* and sizes *3 1/2* Are they connected to condenser, or to circulating pump *circulating pump*

How are the pumps worked *By levers over condenser from after engine*

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 accessible at all times *yes*

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *yes*

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *never used*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Top platform*

OILERS, &c.—

Number of Boilers *2* Description *Cylind. single ended* Whether Steel or Iron *Steel*

Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs* Date of test *12 March 1890 refer 3166*

Description of superheating apparatus or steam chest *none*

Can each boiler be worked separately *yes* Can the superheater be shut off and the boiler worked separately *—*

No. of square feet of fire grate surface in each boiler *52.25* Description of safety valves *Spring* No. to each boiler *2*

Area of each valve *7.07 sq* Are they fitted with easing gear *yes* No. of safety valves to superheater *—* area of each valve *—*

Are they fitted with easing gear *—* Smallest distance between boilers and bunkers or woodwork *15"* Diameter of boilers *14'3"*

Length of boilers *9'8"* description of riveting of shell long. seams *doub butt triple* circum. seams *doub 1/2 lap* Thickness of shell plates *1 1/32*

Diameter of rivet holes *1 1/16* whether punched or drilled *drilled* pitch of rivets *7 1/8"* Lap of plating *19"*

Per centage of strength of longitudinal joint *82.4* working pressure of shell by rules *160* size of manholes in shell *15'x12"*

Size of compensating rings *6x1 1/32* No. of Furnaces in each boiler *3*

Outside diameter *39"* length, top *5'9"* bottom *8'6"* thickness of plates *1 1/32* description of joint *Welded* if rings are fitted *—*

Greatest length between rings *5'9"* working pressure of furnace by the rules *166* combustion chamber plating, thickness, sides *5/8"* back *5/8"* top *5/8"*

Pitch of stays to ditto, sides *8 1/8"* back *8 1/8"* top *8"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *161* Diameter of stays at smallest part *1 1/8"* working pressure of ditto by rules *161* end plates in steam space, thickness *1 1/16"*

Pitch of stays to ditto *16"* how stays are secured *Doub nuts & wash* working pressure by rules *159* diameter of stays at smallest part *2 1/32* working pressure by rules *160* Front plates at bottom, thickness *3/4"* Back plates, thickness *1 1/16"*

Greatest pitch of stays *11 1/4"* working pressure by rules *160* Diameter of tubes *3 1/4"* pitch of tubes *4 1/2"* thickness of tube plates, front *3/4"* back *3/4"* how stayed *9 1/2" pitch of stays* 9" width of water spaces *5"*

Diameter of Superheater or Steam chest *none* length *—* thickness of plates *—* description of longitudinal joint *—* diam. of rivet holes *—*

Pitch of rivets *—* working pressure of shell by rules *—* diameter of flue *—* thickness of plates *—* If stiffened with rings *—*

Distance between rings *—* working pressure by rules *—* end plates of superheater, or steam chest; thickness *—* how stayed *—*

Superheater or steam chest; how connected to boiler *—*

Report on Machinery

Description of furnaces Furnaces

Lloyd's Register Foundation
NWCR 814-0180

DONKEY BOILER— Description *Vertical 4 cross tubes*
 Made at *Gateshead* by whom made *Charles Chapman & Co* when made *24.8.87* where fixed *Stokehold*
 Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *3074* fire grate area *22 sq ft* description of safety
 valves *Spring* No. of safety valves *one* area of each *9.6 sq ft* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *no* diameter of donkey boiler *6'-6"* length *13'-6"* description of riveting *double lap*
 Thickness of shell plates *7/16"* diameter of rivet holes *7/8"* whether punched or drilled *both* pitch of rivets *3 3/16"* lap of plating *4 1/4"*
 per centage of strength of joint *12.5* thickness of crown plates *9/16"* stayed by *6 stays 1 5/8" off diam.*
 Diameter of furnace, top *5'-2"* bottom *5'-6 3/4"* length of furnace *5'-8"* thickness of plates *9/16"* description of joint *single lap*
 Thickness of furnace crown plates *9/16"* stayed by *as shell crown 9 rows 1 1/8" stays* working pressure of shell by rules *86*
 Working pressure of furnace by rules *80* diameter of uptake *15"* thickness of plates *7/16"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *1/3 crank shaft, propeller shaft and propeller
 2 top and 2 bottom end connecting rod bolts, 2 main bearing bolts, one set
 of coupling bolts, one set of flange feed pump valves bolts & nuts assorted
 bar iron of various sizes and ordinary engine room outfit.*

The foregoing is a correct description,
John Readhead & Sons Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this
 vessel has been constructed under special survey, the
 material & workmanship are sound and good and eligible
 in my opinion to have the Record **LMC 4-90** in the
 Register Book of the Society*

*Heating surface = 3397 sq ft
 N.P. by rule 231*

*It is submitted that this vessel is eligible to
 have + LMC 4-90 recorded.
 N.A.
 5.5.90*

The amount of Entry Fee .. £ *2* : received by me,
 Special .. *gp* .. £ *31* : 11 :
 Donkey Boiler Fee .. £ .. : :
 Certificate (if required) .. £ *gratis* *3/6* / 1890
 To be sent as per margin.
 (Travelling Expenses, if any, £ ..)

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

Committee's Minute **TUES 6 MAY 1890**

~~XXXXXX~~ + LMC 4/90

