

REPORT ON MACHINERY.

No. 5319

No. in Survey held at
Reg. Book.

Hull

Date, first Survey Dec^r 18/82 Last Survey 30th May 1883

824 on the iron Steam Ship 'Annie'

Tons 244

Master Spink

Built at

Hull

When built

1864

Engines made at

Hull

By whom made

M. Samuelson

when made

1870

Boilers made at

Hull

By whom made

Charles F.

when made

1882

Registered Horse Power

98

Owners

Goole Steam Ship Co

Port belonging to

Goole

ENGINES, &c.—

Description of Engines Vertical inverted, Compound & Surface Condensing

Diameter of Cylinders 21 1/4" & 32 1/2" Length of Stroke 24" No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____

Diameter of Screw shaft 8 5/8" Diameter of Tunnel shaft 8 1/2" Diameter of Crank shaft journals 7 1/2" Diameter of Crank pin 7 1/2" size of Crank web 7 1/2" x 12" 4 1/2" x 10 1/2"

Diameter of screw 10" 6" Pitch of screw 15" 0" No. of blades 4 state whether moveable No total surface _____

No. of Feed pumps 2 diameter of ditto 4 1/2" & 4 1/4" Stroke 12" Can one be overhauled while the other is at work No

No. of Bilge pumps 2 diameter of ditto 4 1/2" Stroke 12" Can one be overhauled while the other is at work Yes

Where do they pump from off well, engine room & main hold

No. of Donkey Engines

one

Size of Pumps 4" x 8"

Where do they pump from

Sea & engine room bilge with

delivery to deck, overboard, boiler & condenser.

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 No

No. of bilge injections one and sizes 3"

Are they connected to condenser, or to circulating pump Circulating pump

How are the pumps worked By rod & lever from piston rod crosshead

Are all connections with the sea direct on the skin of the ship Yes

Are they Valves or Cocks

Locks

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 Below

Are they each fitted with a discharge valve always accessible on the plating of the vessel Cir. only Are the blow off cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers donkey discharge & exhaust steam How are they protected wood casing

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes in E. Room

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 7th Feb. 83

Is the screw shaft tunnel watertight No and fitted with a sluice door No worked from —

BOILERS, &c.—

Number of Boilers one Description Circular, multitubular of ordinary marine type

Working Pressure app^r 85 lb. Tested by hydraulic pressure to 170 lb. Date of test 9th Oct. 82

Description of superheating apparatus or steam chest none fitted

Can each boiler be worked separately X Can the superheater be shut off and the boiler worked separately X

No. of square feet of fire grate surface in each boiler 58 Description of safety valves Spring loaded

No. to each boiler 2 area of each valve 19.63 sq. in. Are they fitted with easing gear Yes

No. of safety valves to superheater X area of each valve X are they fitted with easing gear X

Smallest distance between boilers and bunkers or woodwork 6 inches

Diameter of boilers 15' 3" Length of boilers 10' 0" description of riveting of shell long. seams abreast butts with circum. seams abreast laps

Thickness of shell plates 1 3/8" diameter of rivet holes 1 5/8" whether punched or drilled drilled pitch of rivets Long. 5 1/4"

Lap of plating 13" straps per centage of strength of longitudinal joint 68 working pressure of shell by rules 88 lb.

Size of manholes in shell 10" x 12" size of compensating rings 28" x 24" x 1 1/8"

No. of Furnaces in each boiler 3 outside diameter 47" length, top 7' 0" bottom 9' 4"

Thickness of plates 1/2" description of joint welded if rings are fitted Yes greatest length between rings 4' 7 1/2"

Working pressure of furnace by the rules 100 lb. 85 lb.

Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Pitch of stays to ditto sides 9' 6" x 8' 6" back 7' 6" to 9' 6" top 8' 6" to 9' 6"

If stays are fitted with nuts or riveted heads nut working pressure of plating by rules 85 lb. (top)

Diameter of stays at smallest part 1 5/8" working pressure of ditto by rules 106 lb.

End plates in steam space, thickness 7/8" pitch of stays to ditto 17" x 15 1/2" how stays are secured at the nut washers

Working pressure by rules 95 lb. diameter of stays at smallest part 2 1/2" working pressure by rules 100 lb.

Front plates at bottom, thickness 1 1/8" Back plates, thickness 1 1/8" greatest pitch of stays 12" working pressure by rules 100 lb.

Diameter of tubes $3\frac{1}{2}$ pitch of tubes $4\frac{1}{4}$ thickness of tube plates, front $3\frac{1}{4}$ back $3\frac{1}{4}$
How stayed *Stay tubes as appd* pitch of stays $14\frac{1}{2} \times 9\frac{1}{4}$ width of water spaces $1\frac{1}{4}$
Diameter of Superheater or Steam chest length
Thickness of plates description of longitudinal joint diameter 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

DONKEY BOILER—

Description *Not new - circular vertical with internal flue*

Made at By whom made when made
Where fixed *on deck* working pressure *45 lb.* Tested by hydraulic pressure to No. of Certificate
Fire grate area Description of safety valves *dead load* No. of safety valves *one* area of each *6.5 sq. in.*
If fitted with easing gear *no* If steam from main boilers can enter the donkey boiler *yes (see fixture)*
Diameter of donkey boiler length description of riveting
thickness of shell plates diameter of rivet holes whether punched or drilled
pitch of rivets lap of plating per centage of strength of joint
thickness of crown plates stayed by
Diameter of furnace, top bottom length of furnace
thickness of 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 plates thickness of water tubes

The foregoing is a correct description,

EARLE'S SHIPBUILDING & ENGINEERING COY. LIMITED Manufacturers of the main Boiler

It is made in

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

Now done. Two main Boiler (made in 1882) with all necessary fittings placed in the ship.

Engines overhauled throughout & put in good working order.

A new high pressure Cylinder with piston & slide valve & complete new brass liner in air pump & bucket turned to fit & repacked.

Circulating pump & all foot & head valves overhauled. Feed & Bilge pumps overhauled & valves made good as required. Pumping arrangements overhauled & a suction fitted, to pump by the bilge pump from main hold. Crank shaft stripped & found in safe working condition. Tail shaft drawn, found good & a new cast iron bush fitted in the stern tube. Bilge injection overhauled. Air Sea cocks overhauled (done at anchor).

Safety valves set under steam to working pressure. Engines tried at morning.

Donkey Engine repaired & put in good order. Donkey Boiler examined & thickness of plates when drilled found satisfactory. New seat to Safety valve same.

The workmanship now done is good. This vessel is not fitted with valves at the ship's side for the discharge of the donkey engine & Bilge pumps. Two of these pipes being down the dead load line. I forward herewith a letter from the Ship Engineer for the Owners relative to this subject, and instead of the promise contained therein to fit these valves at the first opportunity, I beg to submit the case for prompt consideration.

The amount of Entry *£ 4 : 7 : 6* received by me, with a view to the notification L.M.C. 5.83. + N.B 82

Special *£ 4 : 7 : 6* Paid Keel letter 1/8/81 in the Register Book

Certificate (if required) .. £ : 2 : 6 18

To be sent as per margin.

(Travelling Expenses, if any, £ 1.0.6)

Committee's Minute

FRIDAY 15 JUNE 1883

18

L.M.C. 5.83 + N.B 82

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The photo-plate copy of boiler is forwarded.