

REPORT ON MACHINERY.

No.

Port of

No. in Survey held at *London*
Reg. Book.

Date, first Survey *Apl. 15* Last Survey *Mar. 14* 1889.
(Number of Visits *15*)

on the *Paddle Steamer "Duncan"*

Master *Blackwall* Built at *Blackwall* By whom built *R & A Green* Tons
Engines made at *Greenwich* By whom made *John Penn & Son* When built *1888*

Boilers made at *Deptford* By whom made *Do* when made *1888*

Registered Horse Power *140* Owners *Metropolitan Bd. Wks.* when made *1888*

Port belonging to *London*

ENGINES, &c.—

Description of Engines *Diagonal 4 cylinders*

Diameter of Cylinders *33"* Length of Stroke *36* No. of Rev. per minute *9 1/2* Point of Cut off, High Pressure *Low Pressure*

Diameter of Screw shaft *✓* Diam. of Tunnel shaft *✓* Diam. of Crank shaft journals *9 1/2* Diam. of Crank pin *9 1/2* size of Crank webs *11 x 7*

Diameter of screw *✓* Pitch of screw *✓* No. of blades *✓* state whether moveable *✓* total surface *✓*

No. of Feed pumps *2* diameter of ditto *3"* Stroke *5"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *1* diameter of ditto *4* Stroke *8* Can one be overhauled while the other is at work *✓*

Where do they pump from *Engine Rm. Fore & Aft Hold*

No. of Donkey Engines *2* Size of Pumps *3 1/2 x 6* Where do they pump from *E. Rm. Sea L & A. Hold*

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 *4"* Are they connected to condenser, or to circulating pump *centrifugal bilge pump*

How are the pumps worked *Levers on crosshead*

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 *✓*

Is the screw shaft tunnel watertight *✓* and fitted with a sluice door *✓* worked from *✓*

BOILERS, &c.—

Number of Boilers *Two* Description *Multitubular* Whether Steel or Iron *All Steel*

Working Pressure *30 lbs.* Tested by hydraulic pressure to *60 lbs* Date of test *Nov. 12th 1888*

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 *44* Description of safety valves *Direct spring* No. to each boiler *2*

Area of each valve *19.6* 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 *18"* Diameter of boilers *8' 6 3/4"*

Length of boilers *17.3* description of riveting of shell long. seams *double lap* circum. seams *single lap* Thickness of shell plates *3/8"*

Diameter of rivet holes *3/4"* whether punched or drilled *drilled* pitch of rivets *2 1/2"* Lap of plating *3 3/4"*

Per centage of strength of longitudinal joint *70%* working pressure of shell by rules *57 lbs.* size of manholes in shell *16 x 12*

Size of compensating rings *6 x 1"* No. of Furnaces in each boiler *2*

Outside diameter *3' 7 1/4"* length, top *7' 3"* bottom *7' 3"* thickness of plates *3/8"* description of joint *Welded* if rings are fitted *yes*

Greatest length between rings *3' 9"* working pressure of furnace by the rules *71 lbs.* combustion chamber plating, thickness, sides *7/16"* back *7/16"* top *7/16"*

Pitch of stays to ditto, sides *13"* back *13"* top *13"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *32 lbs.*

Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *43 lbs.* end plates in steam space, thickness *9/16"*

Pitch of stays to ditto *18"* how stays are secured *nuts & washers* working pressure by rules *35 lbs.* diameter of stays at smallest part *1 1/4"*

Greatest pitch of stays *✓* working pressure by rules *✓* Front plates at bottom, thickness *9/16"* Back plates, thickness *9/16"*

plates, front *9/16"* back *9/16"* how stayed *4 tubes* pitch of stays *16"* thickness of tube *✓*

Diameter of Superheater or Steam chest *✓* 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 *✓*

LON685-0252

49282 - Lm.

DONKEY BOILER— Description

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 _____ if fitted with easing gear _____ if steam from main boilers can enter the donkey boiler _____

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 _____

SPARE GEAR. State the articles supplied :—

The foregoing is a correct description,
Manufacturer.

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

These Engines have been built under Special Survey
Material & Workmanship good, & eligible in my
opinion to be marked in the Reg. B.R.-L.M.C 3.89

It is submitted that the vessel
is eligible to have + L.M.C 3.89
recorded, subject to the bilge inspection
valve being fitted.
W.A.
15.3.89

The amount of Entry Fee .. £ 2 : 0 : received by me,
Special £ 21 : — :
Donkey Boiler Fee £ : :
Certificate (if required) .. £ : : 15.3.1889.
To be sent as per margin.
(Travelling Expenses, if any, £)

Alb

Geo. S. Thompson
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute
FRIDAY 15 MARCH 1889
+ CMB 3/89

