

REPORT ON MACHINERY. 49965

Port of London

Received at London Office

No. in Survey held at London
Book.

Date, first Survey Sept 11th

Last Survey Oct 26th 1889

(Number of Visits 6)

on the Boiler of S.S. Petrel

Tons 540

Master Randall Built at Aberdeen By whom built Hall Russell

When built 1846

Engines made at Aberdeen By whom made Hall Russell

when made 1846

Boilers ^{renovated} made at Deptford By whom made General Steam Nav Co

when made 1889 + made in 1846

Registered Horse Power 99 Owners General Steam Nav Co Port belonging to London

ENGINES, &c.—

Description of Engines

Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure

Diameter of Screw shaft Diam. of Tunnel shaft Diam. of Crank shaft journals Diam. of Crank pin size of Crank webs

Diameter of screw Pitch of screw No. of blades state whether malleable total surface

No. of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work

Where do they pump from

No. of Donkey Engines Size of Pumps Where do they pump from

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

No. of bilge injections and sizes Are they connected to condenser, or to circulating pump

How are the pumps worked

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

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

What pipes are carried through the bunkers How are they protected

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

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

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 one Description Horizontal multitubular Whether Steel or Iron Iron

Working Pressure 65 lbs Tested by hydraulic pressure to 130 lbs Date of test

Description of superheating apparatus or steam chest Horizontal dome stayed

Can each boiler be worked separately — Can the superheater be shut off and the boiler worked separately No

No. of square feet of fire grate surface in each boiler 54 Description of safety valves No. to each boiler

Area of each valve 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 1-0" Diameter of boilers 13-0"

Length of boilers 9-6" description of riveting of shell long. seams double riveted Butt straps circum. seams lap double Thickness of shell plates 15-10"

Diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 4" Lap of plating 4 1/8"

Per centage of strength of longitudinal joint 66.5 working pressure of shell by rules 81.1 size of manholes in shell 14x13

Size of compensating rings 4" x 4" x 3/4" angle No. of Furnaces in each boiler 3

Outside diameter 3-2" length, top 6-6" bottom 4-0" thickness of plates 1/2" description of joint lap if rings are fitted on bottom yes

Greatest length between rings 4-0" working pressure of furnace by the rules 84 combustion chamber plating, thickness, sides 7/16" back 7/16" top 7/16"

Pitch of stays to ditto, sides 9" back 9" top 8" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 65

Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 110 end plates in steam space, thickness 3/4"

Pitch of stays to ditto 1-3" + 1-5" how stays are secured nuts double working pressure by rules 69 lbs diameter of stays at smallest part 2 3/16"

working pressure by rules 110 Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"

Greatest pitch of stays 14 1/4" working pressure by rules 60 Diameter of tubes 3 1/2" pitch of tubes 4 3/4" thickness of tube plates, front 5/8" back 5/8"

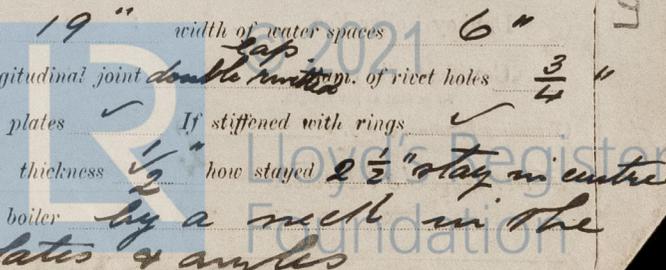
how stayed tubes pitch of stays 19" width of water spaces 6"

Diameter of Superheater Steam chest 3-9" length 8-0" thickness of plates 1/2" description of longitudinal joint double riveted of rivet holes 3/4"

Pitch of rivets 2 1/2" working pressure of shell by rules 119 diameter of flue ✓ thickness of plates ✓ If stiffened with rings ✓

Distance between rings ✓ working pressure by rules ✓ end plates of superheater steam chest; thickness 1/2" how stayed 2 1/2" stay in centre

Superheater or steam chest; how connected to boiler by a neck in the centre & supported at each end by plates & angles



4996520n

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. *This boiler came out of the "S.S. Penguin" & has been renovated, that is; has had a new entire furnace, new tubes & new stays throughout fitted also new bottom plates & part of shell plates at sides doubled. It has been tested to double the working pressure & has been examined internally & externally & appears to be in a sound condition & eligible in my opinion to be classed LMC. 10.89 in the Register Book*

It was made in 1846, taken out of "S.S. Penguin" in 1886 & lay in the General Steam Harb'g yard until the present time. The repairs (extensive) have been extending over the period that it lay in the yard, that is; men have been working at it during periods of slackness.

The amount of Entry Fee .. £ : : received by me,
 Special .. £ : :
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : 18
To be sent as per margin.
 (Travelling Expenses, if any, £ ..)

Maurice Gibson
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute _____ **FRIDAY 1 NOV 1889**

