

# REPORT ON MACHINERY.

No. 3774

Received at London Office

MONDAY 13 MAY 1887

No. in Survey held at *Aberdeen*

Date, first Survey *21 March* Last Survey *30 April* 1887

Reg. Book.

(Number of Visits *5*)

*SSA* on the *S. S. Paradox*

Tons *226*

Master *Pirie* Built at *Glasgow* By whom built *Simons & Co.*

When built *1857*

Engines made at *Hull* By whom made *Filbert & Cooper*

when made *1871*

Boilers made at *Hull* By whom made *Filbert & Cooper*

when made *1877*

Registered Horse Power *65* Owners *A. H. Taylor*

Port belonging to *Aberdeen*

## 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 moveable 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 platform 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 Description Whether Steel or Iron

Working Pressure Tested by hydraulic pressure to Date of test

Description of superheating apparatus or steam chest

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

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

Area of each valve Are they fitted with easing gear No. of safety valves to superheater area of each valve

Are they fitted with easing gear Smallest distance between boilers and bunkers or woodwork Diameter of boilers

Length of boilers Description of riveting of shell long. seams circum. seams Thickness of shell plates

Diameter of rivet holes whether punched or drilled pitch of rivets Lap of plating

Percentage of strength of longitudinal joint working pressure of shell by rules size of manholes in shell

Size of compensating rings No. of Furnaces in each boiler

Outside diameter length, top bottom thickness of plates description of joint if rings are fitted

Greatest length between rings working pressure of furnace by the rules combustion chamber plating, thickness, sides back top

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

rules Diameter of stays at smallest part working pressure of ditto by rules end plates in steam space, thickness

Pitch of stays to ditto how stays are secured working pressure by rules diameter of stays at

smallest part working pressure by rules Front plates at bottom, thickness Back plates, thickness

Greatest pitch of stays working pressure by rules Diameter of tubes pitch of tubes thickness of tube

plates, front back how stayed pitch of stays width of water spaces

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



3755. Ahn.

**DONKEY BOILER—** Description *Vertical x Tube*  
 Made at *Aberdeen* by whom made *Kell Russell & Co* when made *14-4-87* where fixed *Main deck*  
 Working pressure *70* tested by hydraulic pressure to *140* No. of Certificate *20* fire grate area *11 sq ft* description of safety valves *Spring* No. of safety valves *One* area of each *7 sq* if fitted with easing gear *Yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler *4-8* length *10-0* description of riveting *d lap long seams*  
 Thickness of shell plates *7/16* diameter of rivet holes *13/16* whether punched or drilled *punched + annealed* pitch of rivets *3* lap of plating *1 1/2*  
 per centage of strength of joint *67-3* thickness of crown plates *5/8 + 7/16* stayed by *five stays + slightly dished*  
 Diameter of furnace, top *3-8* bottom *4-2* length of furnace *5-6* thickness of plates *15/32* description of joint *single lap*  
 Thickness of furnace crown plates *1/2* stayed by *dished + as above* working pressure of shell by rules *112*  
 Working pressure of furnace by rules *76* diameter of uptake *13* thickness of plates *1/2* thickness of water tubes *5/16*

**SPARE GEAR.** State the articles supplied:— *The donkey boiler has been made under Special Survey. the material & workmanship is good*

The foregoing is a correct description,

Manufacturer.

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

*To complete S. S. No 1. See Ahn Report 3755.*

*The Main Safety Valves tested under steam - loaded to 60 lbs.*

*A new Donkey boiler has been fitted & the Donkey Safety Valve tested under steam & set to 60 lbs.*

*This submitted that this vessel is eligible to remain as classed.*  
*H. G. 16/5/87*

*The Machinery of this vessel as far as seen is in good order & eligible in my opinion to remain as classed.*

The amount of Entry Fee .. £ : — : — received by me, *HEC*

Special .. £ : — : —

Donkey Boiler Fee .. £ *2* : *2* : *0*

Certificate (if required) .. £ : — : — *28/6/1887*

To be sent as per margin.

(The following Expenses are for the use of the Committee)

Committee's Minute

FRIDAY 20 MAY 1887

*John H. Heck.*

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

*B & M S 2, 87*

*S. S. No 1-87*