

REPORT ON MACHINERY.

3212

No. 3212

Received at London Office

No. in Survey held at *Belfast*

Date, first Survey *19th Aug 1885* Last Survey *20th April 1886*

Reg. Book.

(Number of Visits)

Findings the *Donkey Boiler of the S.S. Saint Fillans* *440 N 186* Tons *2007.87*

Master _____ Built at *Belfast* By whom built *Harland & Wolff* When built *1886*

Engines made at *Belfast* By whom made *Harland & Wolff* when made *1886*

Boilers made at *Belfast* By whom made *Harland & Wolff* when made *1886*

Registered Horse Power _____ Owners _____ Port belonging to _____

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 fr.

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.— for Steam Engines, &c.

Number of Boilers *one* Description *Cylindrical Multi-tubular* Whether Steel or Iron *Steel*
Working Pressure *60 lbs* Tested by hydraulic pressure to *120 lbs* Date of test *8th January 1886*

Description of superheating apparatus or steam chest *none fitted*

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 *8-6*

Length of boilers *9-0* description of riveting of shell long. seams *lap & double rivet* circum. seams *lap & double rivet* Thickness of shell plates *1/2*

Diameter of rivet holes *7/8* whether punched or drilled *drilled* pitch of rivets *3.023* Lap of plating *4 1/4*

Percentage of strength of longitudinal joint *68* working pressure of shell by rules *71.6 lbs* size of manholes in shell *15 x 12*

Size of compensating rings *27 x 24 x 1/2* No. of Furnaces in each boiler *Two*

Outside diameter *30 7/8* length, top *5-9* bottom *8-0* thickness of plates *7/16* description of joint *double butt strap, S.P.R.* if rings are fitted *20*

Greatest length between rings _____ working pressure of furnace by the rules *69.4 lbs* combustion chamber plating, thickness, sides *7/16* back *7/16* top *7/16*

Pitch of stays to ditto, sides *9 1/4 x 9 1/4* back *9 1/4 x 8 1/2* top *9 1/4 x 9 1/4* If stays are fitted with nuts or riveted heads *Nuts* working pressure of plating by rules *63 lbs*

Diameter of stays at smallest part *1.2* working pressure of ditto by rules *82.4 lbs* and plates in steam space, thickness *5/8*

Pitch of stays to ditto *16 1/2 x 16 1/2* how stays are secured *double nut & washers* working pressure by rules *58.7 lbs* diameter of stays at smallest part *2 1/4*

working pressure by rules *87.7 lbs* Front plates at bottom, thickness *5/8* Back plates, thickness *5/8*

Greatest pitch of stays *about 12* working pressure by rules *97.2 lbs* Diameter of tubes *3/4* pitch of tubes *4 1/2 x 4 1/2* thickness of tube plates, front *5/8* back *5/8*

how stayed *stay tube* pitch of stays *12 3/4 x 8 1/2* width of water spaces *1 1/4*

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 _____



3212 Abm

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,

W. and M. G. 1886 Manufacturer.

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

The material and workmanship of this boiler so far as the same has been surveyed by me is good and satisfactory. *P. Pettit*

This auxiliary boiler has been completed in accordance with the approved tracing and rules; the material & workmanship are good and satisfactory; the boiler was tested both under hydraulic and steam pressures and gave entire satisfaction.

M 25/5/86

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, £ _____)

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

Committee's Minute

TUESDAY 25 MAY 1886

