

# REPORT ON MACHINERY.

No. 6893

Received at London Office THURS 26 MARCH 1885

No. in Survey held at  
Reg. Book.

Glasgow

Date, first Survey 9<sup>th</sup> Dec. 1884 Last Survey 16<sup>th</sup> March 1885

(Number of Visits 8)

43.40

on the

Screw Lighter "John Strachan"

Tons 42.84

Master John Johnston

Built at Glasgow

By whom built W. Swan & Coy

When built 1884-5

Engines made at Glasgow

By whom made

Clarkson & Beckett

when made

Boilers made at

By whom made

Lerguson & Son

when made

Registered Horse Power 22½ N.H.P.

Owners Kirkcaldy Leith & Glasgow Steam Packet Co.

Port belonging to Kirkcaldy

## ENGINES, &c.—

Description of Engines

High pressure

Diameter of Cylinders 15" Length of Stroke 15" No. of Rev. per minute — Point of Cut off, High Pressure 6 Low Pressure —

Diameter of Screw shaft 4¼" Diam. of Tunnel shaft 4¼" Diam. of Crank shaft journals 4¼" Diam. of Crank pin 4¼" size of Crank webs 5¼" x 2½"

Diameter of screw 5½" Pitch of screw 8½" No. of blades 3 state whether moveable Solid total surface —

No. of Feed pumps One diameter of ditto 1½" Stroke 15" Can one be overhauled while the other is at work —

No. of Bilge pumps One diameter of ditto 1½" Stroke 15" Can one be overhauled while the other is at work —

Where do they pump from Engine Room

No. of Donkey Engines One Size of Pumps 2½" x 4" stroke Where do they pump from Sea & Bilge

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 none and sizes — Are they connected to condenser, or to circulating pump —

How are the pumps worked Direct Spring

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 Are the blow off cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers pipes to fore peak tank How are they protected Wood casing

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 On Slip before launching

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

## BOILERS, &c.— For particulars of Boilers See other side

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

Per centage 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



6893 gls  
main DONKEY BOILER— Description Vertical with cross-tubes (steel.)  
Made at Glasgow by whom made Ferguson & Son when made 1884.5 where fixed Stake-hold.  
Working pressure 70 lbs tested by hydraulic pressure to 140 lbs. No. of Certificate 1539. fire grate area 19.6 sq ft description of safety  
valves direct spring No. of safety valves One area of each 9.6" if fitted with easing gear yes if steam from main boilers can  
enter the donkey boiler diameter of donkey boiler 6'-0" length 12'-0" description of riveting double lap.  
Thickness of shell plates 7/16" diameter of rivet holes 3/4" whether punched or drilled rim. pitch of rivets 2 1/2" lap of plating 3 1/2"  
per centage of strength of joint 72 thickness of crown plates 1/2" stayed by 6 stays 1 1/4" diameter  
Diameter of furnace, top 4'-6" bottom 5'-0" length of furnace 5'-0" thickness of plates 7/16" description of joint single lap  
Thickness of furnace crown plates 1/2" stayed by as above working pressure of shell by rules 92 lb.  
Working pressure of furnace by rules 70 lb with stay diameter of uptake 18" thickness of plates 7/16" thickness of water tubes 3/8".  
SPARE GEAR. State the articles supplied:— One propeller

The foregoing is a correct description,  
Clarkson & Beckett Manufacturer.

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

The Engine & Boiler of this vessel are of good workmanship  
and materials and are now in good order and safe working condition  
and eligible in our opinion to be noted in the Register Book  
Lloyds M.C. 3/85

It is submitted that this  
vessel is eligible to have the  
notification + L.M. & 3. 85.  
re-corded.

D.P.

26/3/85

The amount of Entry Fee .. £ 1 : - : - received by me,  
Special .. £ 8 : - : -  
Donkey Boiler Fee .. £ - : - : -  
Certificate (if required) .. £ - : - : - 19/3/1885  
To be sent as per margin.  
(Travelling Expenses, if any, £ )

Committee's Minute

FRIDAY 27 MARCH 1885

+ L.M. & 3. 85

John Anderson  
James Morrison  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Clyde District