

# REPORT ON MACHINERY.

No. 18490

Received at London Office

FRIDAY 19 FEB 1886

No. in Survey held at Newcastle & Liverpool Date, first Survey 18<sup>th</sup> April Last Survey 26<sup>th</sup> Octr 1885  
Reg. Book.

on the "Pioneer" (wood) Tons 47

Master L. Liddler Built at Leith By whom built Marr Brothers When built 1885

Engines made at North Shields By whom made J. O. Spencer when made 1885

Boilers made at Manchester By whom made James Blake when made 1885

Registered Horse Power 18 Owners Pioneer Fishing Society Ltd. Port belonging to A. Shields

## ENGINES, &c.—

Description of Engines Compound screw

Diameter of Cylinders 10 1/2 & 20 Length of Stroke 14 No. of Rev. per minute 100 Point of Cut off, High Pressure 5 Low Pressure 5

Diameter of Screw shaft 4 Diam. of Tunnel shaft 4 Diam. of Crank shaft journals 4 Diam. of Crank pin 4 size of Crank webs 5 x 2 1/2

Diameter of screw 5.9 Pitch of screw 8.3 No. of blades 3 state whether moveable no total surface —

No. of Feed pumps one diameter of ditto 2 Stroke 7 Can one be overhauled while the other is at work —

No. of Bilge pumps one diameter of ditto 2 Stroke 7 Can one be overhauled while the other is at work —

Where do they pump from bilge (1)

No. of Donkey Engines one Size of Pumps 2 5/8 x 5 Where do they pump from from bilge (1) & sea

into boiler, on deck & on board.

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 —

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

How are the pumps worked by lever over condenser from after engine

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 new

Is the screw shaft tunnel watertight new and fitted with a sluice door — worked from —

## BOILERS, &c.—

Number of Boilers one Description Vertical (Waters Patent) Whether Steel or Iron Steel

Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test July 16<sup>th</sup> 85

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 9.62 Description of safety valves sprung No. to each boiler one

Area of each valve 12.56 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 7" Diameter of boilers 6' 0"

Length of boilers 10' 0" description of riveting of shell long. seams S. Riv Lap circum. seams S. Riv Lap Thickness of shell plates 3/16"

Diameter of rivet holes 13/16" whether punched or drilled drilled pitch of rivets 2 3/4 Lap of plating 4"

Per centage of strength of longitudinal joint 70% working pressure of shell by rules 91 lbs size of manholes in shell 15" x 12"

Size of compensating rings Steel Riv 6" x 1/2" No. of Furnaces in each boiler one

Outside diameter 3' 9" length, top 3' 9" bottom — thickness of plates 3/16" description of joint S. Riv Lap if rings are fitted —

Greatest length between rings — working pressure of furnace by the rules 80 lbs combustion chamber plating, thickness, sides 3/16" back 3/16" top 1/2"

Pitch of stays to ditto, sides 8 1/2 back 8 1/2 top — If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 80 lbs

Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 80 lbs end plates in steam space, thickness 3/16"

Pitch of stays to ditto Spherical 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 3" pitch of tubes 4" thickness of tube plates, front 3/4" back 3/8"

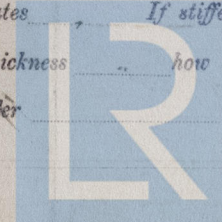
how stayed Stays pitch of stays 12" x 12" width of water spaces 1"

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 —



Lloyd's Register Foundation

5500-LSHT



**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,

*J. Spence* Manufacturer. of engines

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

The Boiler of this vessel has been surveyed during Construction the material and workmanship are of good description and in conformity with the rules.

The engines have been built under special survey, the materials and workmanship are sound & satisfactory eligible in our opinion to be classed  $\nabla$  L M C-10-85 in the Register Book.

It is submitted that this vessel is eligible to have the notification + £10.85 recorded

22/2/86

The amount of Entry Fee *inc.* £ 1 : - : - received by me,  
*Liverpool fee* £ 2 : 2 : - paid as Liv.  
 Special .. .. *inc.* £ 5 : 18 : 0  
 Donkey Boiler Fee .. .. £ - : - : -  
 \* Certificate (if required) .. .. £ 16/- Feb'y 1886  
 (Travelling Expenses, if any, £ - : - : -)

Committee's Minute

TUESDAY 23 FEB 1886

*W. H. S.*  
*Wm. H. Walker*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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