

# REPORT ON MACHINERY.

Port of *Greenock*

Received at London Office *THURS 28 MAY 1891*

No. *10861*

No. in Survey held at *Greenock & Campbeltown* Date, first Survey *11<sup>th</sup> Nov. 1890* Last Survey *24<sup>th</sup> May 1891*

Reg. Book.

(Number of Visits *75*) *1107.20*

on the *S.S. "Briton"*

Tons *699.97*

Master *W. Davis* Built at *Campbeltown* By whom built *Campbeltown S.B. Co.* When built *1891*

Engines made at *Greenock* By whom made *Kincaid & Co. (Limd.)* when made *1891*

Boilers made at *Glasgow* By whom made *H. Wallace & Co.* when made *1891*

Registered Horse Power *98*

Owners *Fairbank & Peay*

Port belonging to *Newcastle*

Rule " " *102*

## ENGINES, &c.—

Description of Engines *Inverted Direct Acting. Triple Expansion.*

Diameter of Cylinders *14 2 1/4 14 1/4* Length of Stroke *33* No. of Rev. per minute *84* Point of Cut off, High Pressure *21* *1 P 16.5* Low Pressure *18*

Diameter of Screw shaft *8 1/2* Diam. of Tunnel shaft *8 1/8* Diam. of Crank shaft journals *8 1/2* Diam. of Crank pin *8 1/2* size of Crank webs *15 1/2 x 6*

Diameter of screw *12 1/4* Pitch of screw *13 1/4* No. of blades *4* state whether moveable *no* total surface *42 square feet*

No. of Feed pumps *2* diameter of ditto *2 1/2* Stroke *18* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* diameter of ditto *2 1/2* Stroke *18* Can one be overhauled while the other is at work *yes*

Where do they pump from *Engine room, stokehold, Cargo hold, & tunnel well.*

No. of Donkey Engines *Two* Size of Pumps *7 1/2 x 6 & 3 1/2 x 5. Duplex* Where do they pump from *Large from Sea, ballast*

*tanks & bilges. Small from Sea, Hot well & Engine room bilges.*

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 *one* and sizes *3 1/2* Are they connected to condenser, or to circulating pump *Circulating pump*

How are the pumps worked *By hand.*

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 *Away.*

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*

Are that 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 *on Slip before launch was launched.*

Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Engine room top platform.*

## BOILERS, &c.—

Number of Boilers *One* Description *See Glasgow Report attached* 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

No. 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

Thickness 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

Thickness 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

Thickness 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

Description of furnaces

GR4317-0195



# REPORT ON MACHINERY.

**DONKEY BOILER—** Description *See Newcastle Survey Report attached.*  
 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 \_\_\_\_\_

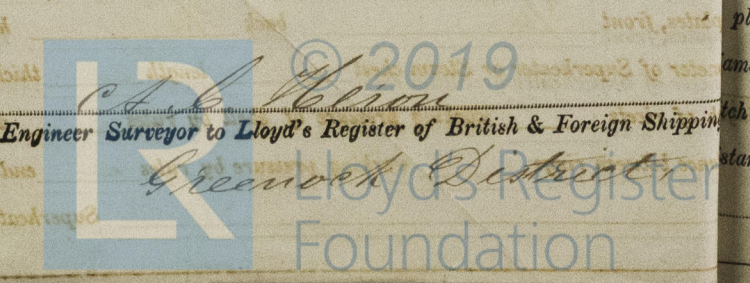
**SPARE GEAR.** State the articles supplied:— *2 Connecting rod top end & 2 bottom end bolts & nuts. 2 Main bearing bolts. A set of coupling bolts. 1 set of feed & bridge pump valves. A quantity of bolts nuts and iron assorted.*

The foregoing is a correct description,  
*Amicaid & Co. Ltd* Manufacturer. *per C. S. Winicoid*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*These Engines have been specially surveyed during construction workmanship good. Shafts examined when being turned & found apparently free from defects. Main steam pipe tested by hydraulic pressure to 320 lbs per square inch. The Engines and Boilers are satisfactorily fitted in vessel and tested under full steam. They are now in good order and safe working condition and are in my opinion eligible to be noted in the Register Book. LMC 5-91.*

*See Newcastle Survey Report attached.*  
*Amicaid & Co. Ltd*  
*C. S. Winicoid*

The amount of Entry Fee £ 2 : - received by me,  
 Special £ 15 : -  
 Donkey Boiler Fee £ : -  
 Certificate (if required) £ *Grain* 27<sup>th</sup> May 1891  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ : -)  
 Committee's Minute  
 + *to Mr. 5/91*



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