

# REPORT ON MACHINERY.

No. 11280

Port of *Glasgow*

MON. 8 FEB 1892

No. in Survey held at *Paisley*

Date, first Survey *31<sup>st</sup> July 1891* Last Survey *22<sup>nd</sup> Jan 1892*

Reg. Book.

on the *S. S. "Palston"*

Received at London Office

(Number of Visits *21*)

Tons { Gross *232*  
Net *100*

Master *Kenneth Stewart* Built at *Paisley* By whom built *J. McArthur & Co* When built *1891-2*

Engines made at *Paisley* By whom made *Bow, McLachlan & Co* when made *1891-2*

Boilers made at *Paisley* By whom made *Bow, McLachlan & Co* when made *1891-2*

Registered Horse Power *33* Owners *P. & J. Hendry & Co* Port belonging to *Glasgow*

## ENGINES, &c.

Description of Engines *Compound* No. of Cylinders *Two*

Diam. of Cylinders *13 1/4" & 26"* Length of Stroke *18"* Rev. per minute *140* Point of Cut off, High Pressure *Var* Low Pressure *Var*

Diameter of Screw shaft *5 1/2"* Diam. of Tunnel shaft *5 1/2"* Diam. of Crank shaft journals *5 1/2"* Diam. of Crank pin *5 1/2"* size of Crank webs *3 1/2" x 7"*

Diameter of screw *6'-4"* Pitch of screw *8'-6"* No. of blades *3* state whether moveable *Sal.* total surface *10 1/2 sq ft*

No. of Feed pumps *One* diameter of ditto *1 7/8"* Stroke *9"* Can one be overhauled while the other is at work *-*

No. of Bilge pumps *One* diameter of ditto *1 7/8"* Stroke *9"* Can one be overhauled while the other is at work *-*

Where do they pump from *all compartments*

No. of Donkey Engines *One* Size of Pumps *4 1/2" x 2 3/8" x 5"* Where do they pump from *Atorell, Sea, 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 *2 1/2"* Are they connected to condenser, or to circulating pump *yes*

How are the pumps worked *by levers*

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 *about*

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 *on stocks before launching*

Is the screw shaft tunnel watertight *none* and fitted with a sluice door *-* worked from *-*

## BOILERS, &c.

No. of Boilers *One* Description *Multitubular* Material *Steel* Letter (for record) *S.*

Working Pressure *120 lbs.* Tested by hydraulic pressure to *240 lbs.* Date of test *17<sup>th</sup> November 1891.*

Description of superheating apparatus or steam chest *none*

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 *26.* Description of safety valves *d. spring* No. to each boiler *two*

Area of each valve *3.5* 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* *9"* Diameter of boilers *9'-0"*

Length of boilers *9'-0"* description of riveting of shell long. seams *d. butt str.* circum. seams *d. riv. lap* Thickness of shell plates *1 1/16"*

Diameter of rivet holes *7/8"* whether punched or drilled *drilled* pitch of rivets *5" x 2 1/2"* Lap of plating *4 1/2"*

Per centage of strength of longitudinal joint *82.5* working pressure of shell by rules *124 lbs* size of manholes in shell *12" x 16"*

Size of compensating rings *d. riv. ring* No. of Furnaces in each boiler *two* Description of Furnaces *plain flue*

Outside diameter *33"* length *6'-0"* thickness of plates *1 7/16"* description of joint *d. butt str.* if rings are fitted *-*

Greatest length between rings *-* working pressure of furnace by the rules *129 lbs* combustion chamber plating, thickness, sides *1 1/2"* back *1 1/2"* top *1 1/2"*

Pitch of stays to ditto, sides *8 x 8 1/2"* back *7 1/2 x 8"* top *8 1/2 x 8"* If stays are fitted with nuts or riveted heads *nuts* working pressure of plating by rules *120 lbs*

Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *125 lbs* and plates in steam space, thickness *7/8" x 7/8" straps*

Pitch of stays to ditto *16" x 13"* how stays are secured *d. nuts* working pressure by rules *120 lbs* diameter of stays at smallest part *2 1/4"*

working pressure by rules *135 lbs* Front plates at bottom, thickness *9/16"* Back plates, thickness *9/16"*

Greatest pitch of stays *-* working pressure by rules *-* Diameter of tubes *3"* pitch of tubes *4" x 4"* thickness of tube plates, front *9/16"* back *9/16"*

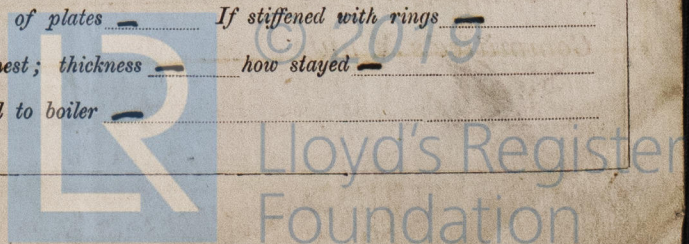
how stayed *stayed* pitch of stays *12" x 8"* width of water spaces *5"*

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 *-*



GLS164-0127



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## 110 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:—

Top and bottom end bolts & nuts.  
 Main bearing & coupling bolts. Feed and  
 bilge pump valves. Bolts nuts & iron anodes.

The foregoing is a correct description,

Manufacturer.

Barr &amp; Co. Glasgow

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

The above mentioned

engines and boiler have been built under  
 special survey and are of good workmanship.

They have been well fitted outboard and tried  
 under steam with satisfactory results. The machinery  
 is now in my opinion in good working order  
 and eligible to be noted: L.M.C. 1.92.

It is submitted that  
 this vessel is eligible for  
 THE RECORD

L.M.C. 1-92

MA 8-2-92

Certificate (if required) to be sent to

The amount of Entry Fee .. £ 1 : : : received by me,

Special .. £ 8 : : :

Donkey Boiler Fee .. £ : : :

(Travelling Expenses, if any, £ )

Committee's Minute

TUES 9 FEB 1892

+ Lmb 1/92

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

Glasgow.

Lloyd's Register  
Foundation