

# REPORT ON MACHINERY.

8066

No. 8066

No. in Survey held at Campbelltown & Ayr  
Reg. Book.

Date, first Survey

(Received in London Office 15/11/81

Last Survey

1881

on the

Iron Screw Steamer "John Burbery"

Tons 282  
148

Master

J. A. Parvall

Built at Campbelltown

When built

1881

Engines made at

Ayr

By whom made

J. & J. Young

when made

1881

Boilers made at

Ayr

By whom made

J. & J. Young

when made

1881

Registered Horse Power

55

Owners

Messrs. Dawson & Marley

Port belonging to

Cardiff

## ENGINES, &c.—

Description of Engines

Compound, Inverted, Direct-Acting, Surface-Condensing

Diameter of Cylinders

19" & 36"

Length of Stroke

24"

No. of Rev. per minute

90 app.

Point of Cut off, High Pressure

1/2 app.

Low Pressure

3/4 app.

Diameter of Screw shaft

7"

Diameter of Tunnel shaft

6 1/4"

Diameter of Crank shaft journals

7"

Diameter of Crank pin

7"

size of Crank webs

9" X 1 1/2"

Diameter of screw

9-9

Pitch of screw

14-0"

No. of blades

4

state whether moveable

no

total surface

30 sq. ft.

No. of Feed pumps

One

diameter of ditto

2"

Stroke

24"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

One

diameter of ditto

2"

Stroke

24"

Can one be overhauled while the other is at work

yes

Where do they pump from

Engine bilges and main hold.

No. of Donkey Engines

One

Size of Pumps

4 diam 6" stroke

Where do they pump from

Sea, ballast tank, & 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

except under cargo

No. of bilge injections

One

and sizes

3 1/2"

Are they connected to condenser, or to circulating pump

Circulating pumps.

Direct by crosshead beam from L.P. crosshead.

How are the pumps worked

Direct by crosshead beam from L.P. crosshead.

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

Valves and cocks.

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

yes

What pipes are carried through the bunkers

none

How are they protected

yes

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 vessel, before being launched.

Is the screw shaft tunnel watertight

no tunnel and fitted with a sluice door

worked from

yes

## BOILERS, &c.—

Number of Boilers

One

Description

Round, horizontal, multitubular.

Working Pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

22<sup>nd</sup> August, 1881.

Description of ~~superheating apparatus~~ or steam chest

Longitudinal receiver

Can each boiler be worked separately

yes

Can the superheater be shut off and the boiler worked separately

yes

No. of square feet of fire grate surface in each boiler

33 sq. ft.

Description of safety valves

Direct-spring (Young)

No. to ~~each~~ boiler

Two

area of each valve

9.6 sq. inch

No. of safety valves to superheater

none

area of each valve

none

are they fitted with easing gear

yes

yes

Smallest distance between boilers and bunkers

on woodwork

Diameter of boilers

10' 9"

Length of boilers

9' 0"

description of riveting of shell long. seams

Double strap circum. seams

Single lap

Thickness of shell plates

13/16"

diameter of rivet holes

17/16"

whether punched or drilled

punched

pitch of rivets

3 5/8"

Lap of plating

Straps 9"

per centage of strength of longitudinal joint

Size of manholes in shell

16" x 12"

size of compensating rings

Angle ring 3' x 3 3/4' x 9 1/16"

working pressure of shell by rules

89 lbs

No. of Furnaces in each boiler

Two

outside diameter

Thickness of plates

1/2"

description of joint

Straps

if rings are fitted

angle ring under each

greatest length between rings

100 lbs

Working pressure of furnace by the rules

100 lbs

Combustion chamber plating, thickness, sides

1/2"

back

1/2"

top

1/2"

Pitch of stays to ditto

9' x 8"

sides

9' x 8"

back

9' x 8"

top

Girders 9 1/4' x 8"

If stays are fitted with nuts or riveted heads

Nuts

working pressure of plating by rules

94 lbs

Diameter of stays at smallest part

1 1/4"

working pressure of ditto by rules

101 lbs

End plates in steam space, thickness

5 1/2"

pitch of stays to ditto

12" x 12"

how stays are secured

By double nuts

Working pressure by rules

98 lbs

diameter of stays at smallest part

Front plates at bottom, thickness

5 7/8"

Back plates, thickness

7 7/8"

greatest pitch of stays

9' x 8"

working pressure by rules

100 lbs

working pressure by rules

Working pressure by rules

98 lbs

diameter of stays at smallest part

1 3/4"

working pressure by rules

100 lbs

Front plates at bottom, thickness

5 7/8"

Back plates, thickness

Working pressure by rules

98 lbs

diameter of stays at smallest part

1 3/4"

working pressure by rules

100 lbs

Front plates at bottom, thickness

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Back plates, thickness

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Front plates at bottom, thickness

5 7/8"

Back plates, thickness

Working pressure by rules

98 lbs

diameter of stays at smallest part

1 3/4"

working pressure by rules

100 lbs

Front plates at bottom, thickness

5 7/8"

Back plates, thickness

Working pressure by rules

98 lbs

diameter of stays at smallest part

Diameter of tubes  $3\frac{1}{2}$ " pitch of tubes  $4\frac{3}{4} \times 4\frac{3}{4}$ " thickness of tube plates, front  $\frac{5}{8}$ " back  $\frac{5}{8}$ "  
 How stayed *By tubes* pitch of stays  $14\frac{1}{4} \times 14\frac{1}{4}$ " width of water spaces 5' at back, 12' between tubes.  
 Diameter of ~~superheater~~ Steam chest 2'6" length 4'0"  
 Thickness of plates  $\frac{1}{2}$ " description of longitudinal joint *Double lap* diameter of rivet holes  $1\frac{3}{16}$ " pitch of rivets 3"  
 Working pressure of shell by rules 149 lbs Diameter of flue *—* thickness of plates *—*  
 If stiffened with rings *—* distance between rings *—* Working pressure by rules *—*  
 End plates of ~~superheater~~ on steam chest; thickness  $\frac{1}{2}$ " How stayed *Dished and riveted to shell*  
~~Superheater~~ on steam chest; how connected to boiler *By strong neck 15" dia. flanged and riveted.*  
**DONKEY BOILER—** Description *Placed, vertical, cross tubes.*  
 Made at *Ays* By whom made *J. G. Young* when made 1881  
 Where fixed *In stockhold* working pressure *60 lbs* Tested by hydraulic pressure to 120 lbs No. of Certificate 72  
 Fire grate area 9.6 sq. ft. Description of safety valves *Direct spring* No. of safety valves *One* area of each *7 sq. ins*  
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *By opening valves.*  
 Diameter of donkey boiler  $4'0"$  length  $8'0"$  description of riveting *Double lap*  
 thickness of shell plates  $\frac{3}{8}$ " diameter of rivet holes  $1\frac{3}{16}$ " whether punched or drilled *Punched*  
 pitch of rivets  $2\frac{7}{8}$ " lap of plating 4" per centage of strength of joint 72  
 thickness of crown plates  $\frac{7}{16}$ " stayed by *Dished & by uptake.*  
 Diameter of furnace, top  $3'6"$  bottom  $3'4"$  length of furnace  $4'0"$   
 thickness of plates  $\frac{3}{8}$ " description of joint *Lap joint.*  
 thickness of furnace crown plates  $\frac{7}{16}$ " stayed by *Dished and by uptake.*  
 Working pressure of shell by rules 84 lbs working pressure of furnace by rules 43 lbs as a flue  
 diameter of uptake 11" thickness of plates  $\frac{3}{8}$ " thickness of water tubes  $\frac{3}{8}$ "

The foregoing is a correct description,

*J. G. Young*

Manufacturers

*J. G. Young*

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

*The Engines and Boilers have been inspected by me during construction, they are in good and efficient condition, eligible to be classed "LLOYD'S M.C." and to be noted "9.81."*

*This submitted that this vessel is eligible to have the qualification LLOYD'S M.C. recorded J.M. 15/11/81*

The amount of Entry Fee £ 2 : : , received by me,

Special *MC* £ 8 : 5 :

Certificate (if required) £ " : " : 16<sup>th</sup> Sept 1881

To be sent as per margin.

(Travelling Expenses, if any, £ 6 : 6 : )

Committee's Minute

Friday, December, 1881

*Alfred H. Alchin*

Engineer/Surveyor to Lloyd's Register of British & Foreign Shipping

*Greenock*