

## REPORT ON MACHINERY.

Port of *Glasgow*

WED. 21 SEP 1898

No. in Survey held at *Glasgow*  
Reg. Book.Date, first Survey *26 Aug*Last Survey *13. Sept* 18 *98*

on the

*Donkey Boilers for L.I. Australasian*(Number of Visits *5*)Tons { Gross  
NetWhen built *1884-4*

Master

Built at

*Glasgow*

By whom built

*R. Kaper Hons*

Engines made at

*Glasgow*

By whom made

*R. Kaper Hons*when made *1884*

Boilers made at

By whom made

*do*when made *1884*Registered Horse Power *355*

Owners

*G. Thompson & Co.*

Port belonging to

*Aberdeen*

Nom. Horse Power as per Section 28

*+1000H, +LMC 5.96*  
*55803-5.96* *Spar dk 5.98* *BSL 98*

Is Electric Light fitted

## ENGINES, &amp;c.—Description of Engines

No. of Cylinders

No. of Cranks

Diameter of Cylinders

Length of Stroke

Revolutions per minute

Diameter of Screw shaft

as per rule

Diameter of Tunnel shaft

as per rule

Diameter of Crank shaft journals

Diameter of Crank pin

Size of Crank webs

Diameter of screw

Pitch of screw

No. of blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &amp;c.

No. of bilge injections

sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room &amp; size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

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

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the discharge pipes above or below the deep water line

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

What pipes are carried through the bunkers

How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—

(Letter for record

Total Heating Surface of Boilers

Is forced draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of safety valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted

with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean diameter of boilers

Length

Material of shell plates

Thickness

Description of riveting: circum. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of Stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

65182-0015



0461

16402 gds

DONKEY BOILER— Description *bylt. built. Single ended*  
Made at *Glasgow* By whom made *R. Napier & Sons* When made *1898* Where fixed  
Working pressure *160* tested by hydraulic pressure to *320* No. of Certificate *4625* Fire grate area *26 1/2* Description of safety valves *Direct spring*  
No. of safety valves *2* Area of each *7 1/2* Pressure to which they are adjusted If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler  
Description of riveting long. seams *R. Butt Strap 5 R* Diameter of rivet holes *1 3/8* Whether punched or drilled *Drilled* Pitch of rivets *5 1/2*  
Lap of plating *✓* Per centage of strength of joint Rivets *91* Thickness of shell crown plates *✓* Radius of do. *✓* No. of Stays to do. *✓*  
Dia. of stays. *✓* Diameter of furnace Top *2-6 1/2* Bottom Length of furnace *6-2* Thickness of furnace plates *5/8* Description of joint *Welded* Thickness of furnace crown plates *✓* Stayed by *✓* Working pressure of shell by rules *179 1/2*  
Working pressure of furnace by rules *189 1/2* Diameter of uptake *✓* Thickness of uptake plates *✓* Thickness of water tubes *✓*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,  
Manufacturer. *R. NAPIER & SONS, Limited.*  
*M. W. May.*

Dates of Survey *1898*  
During progress of work in shops - *August: - 26. September. 13.*  
During erection on board vessel - *Two*  
Total No. of visits

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

ENGINES—Length of stern bush Diameter of crank shaft journals *as per rule* Diameter of thrust shaft under collars *as fitted*  
BOILERS—Range of tensile strength Are they welded or flanged DONKEY BOILERS—No. *1* Range of tensile strength *29-32*  
Is the approved plan of main boiler forwarded herewith Is the approved plan of donkey boiler forwarded herewith *Yes*

*This donkey boiler has been constructed under Special Survey, is of good material and workmanship, and has been tested by hydraulic pressure to 320 lbs per sq. inch, when it was found to be tight & sound. This boiler is eligible, in my opinion, to have record of N.D.B. 98 inserted in the Register Book.*

Certificate (if required) to be sent to  
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. £ : : When applied for,  
Special .. .. £ *2 : 2* } *20. 9. 98*  
Donkey Boiler Fee .. .. £ : : When received  
Travelling Expenses (if any) £ : : *22/9/98*

Committee's Minute *FRI, 14 OCT 1898*  
Assigned

*J. Kerr*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.