

# REPORT ON MACHINERY.

6309

No. 6309

Received at London Office Rec'd 8th Nov. 1883.

No. in Survey held at Glasgow. Date, first Survey 28th Feb. Last Survey 6th Nov. 1883.

Book. S. S. Adelaide. (Number of Visits 28) 91% Tons 1625

Master Lockyer Built at Glasgow By whom built J. & W. Henderson & Co. When built 1883.

Engines made at Glasgow By whom made J. & W. Henderson & Co. when made 1883.

Boilers made at do. By whom made do. when made 1883.

Registered Horse Power 267 Owners Adelaide Steam Ship Co. Ltd. Port belonging to Adelaide.

**ENGINES, &c.—**

Description of Engines Compound Inverted Direct Acting.

Diameter of Cylinders 35 1/2 x 69" Length of Stroke 48" No. of Rev. per minute 64. Point of Cut off, High Pressure var Low Pressure var.

Diameter of Screw shaft 13 1/2" Diam. of Tunnel shaft 12 1/2" Diam. of Crank shaft journals 13 1/2" Diam. of Crank pin 13 1/4" size of Crank webs Built.

Diameter of screw 15'-0" Pitch of screw 22 ft No. of blades 4 state whether moveable yes total surface 83 sq. ft

No. of Feed pumps 2 diameter of ditto 5" Stroke 4 1/2" Can one be overhauled while the other is at work yes.

No. of Bilge pumps 2. diameter of ditto 5" Stroke 4 1/2" Can one be overhauled while the other is at work yes.

Where do they pump from All Compartments.

No. of Donkey Engines Two. Size of Pumps 6" x 12" stroke Where do they pump from Hotwell, Sew,  
Bilges and Tanks. 8" x 8" stroke

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 1 1/4" Are they connected to condenser, or to circulating pump Cir. pump.

How are the pumps worked Crosshead attached to Piston Rod

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 Bilge & Tank pipes How are they protected by wood flooring

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 22nd October 1883.

Is the screw shaft tunnel watertight yes. and fitted with a sluice door yes. worked from Upper platform.

**OILERS, &c.—**

Number of Boilers Two. Description Round Multitubular Whether Steel or Iron part steel.

Working Pressure 90 lbs. Tested by hydraulic pressure to 180 lbs. Date of test 18th August 1883.

Description of superheating apparatus or steam chest None.

Can each boiler be worked separately yes. Can the superheater be shut off and the boiler worked separately no.

No. of square feet of fire grate surface in each boiler 120. Description of safety valves direct spring No. to each boiler Two.

Area of each valve 30.67 Are they fitted with easing gear yes. No. of safety valves to superheater 1 area of each valve —

Are they fitted with easing gear — Smallest distance between boilers and bunkers or woodwork 24" Diameter of boilers 14'-6"

Length of boilers 17'-0" description of riveting of shell long. seams double butt circum. seams double lap. Thickness of shell plates 1 3/32

Diameter of rivet holes 1 7/16 whether punched or drilled drilled pitch of rivets 1 3/4" Lap of plating 22" straps

Per centage of strength of longitudinal joint 75. working pressure of shell by rules 93 lbs. size of manholes in shell 12 1/2" x 16 1/2"

Size of compensating rings 4" angle iron No. of Furnaces in each boiler 6.

Outside diameter 3'-10" length, top 6'-8" bottom through. thickness of plates 7/16 description of joint welded if rings are fitted corrugated

Greatest length between rings — working pressure of furnace by the rules 108 lbs. combustion chamber plating, thickness, sides 15/16 back — top 15/16

Pitch of stays to ditto, sides 8 1/2" x 8 1/2" back — top 7 3/4" x 8 1/2" If stays are fitted with nuts or riveted heads Nuts. working pressure of plating by rules 93 lbs. Diameter of stays at smallest part 1.2" working pressure of ditto by rules 100 lbs. end plates in steam space, thickness 3/4"

Pitch of stays to ditto 15" x 15 1/4" how stays are secured Double Nuts working pressure by rules 87 lbs. diameter of stays at smallest part 2 3/4" working pressure by rules 150 lbs. Front plates at bottom, thickness 5/8" Back plates, thickness 5/8"

Greatest pitch of stays — working pressure by rules — Diameter of tubes 4" pitch of tubes 5 1/2" thickness of tube plates, front 3/4" back 3/4" how stayed S-tubes pitch of stays 16 1/2" x 11" width of water spaces 5 1/2"

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 —

Port is also sent on the Hull of the Ship



6309 gls.

DONKEY BOILER—

Description

Vertical (Part Steel)

Made at Glasgow by whom made D & W. Henderson & Co. when made 1883. where fixed For? Stoke Newington

Working pressure 50 lbs tested by hydraulic pressure to 100 lbs. No. of Certificate 1185. fire grate area 26 sq ft. description of safety valves direct spring

No. of safety valves two area of each 7.07" if fitted with easing gear yes if steam from main boilers can enter the donkey boiler not

diameter of donkey boiler 6'-4" length 13' high description of riveting single & double

Thickness of shell plates 3/8" diameter of rivet holes 3/4" whether punched or drilled rim pitch of rivets 3" lap of plating 3 1/2"

per centage of strength of joint 75. thickness of crown plates 5/8" stayed by Rod stays 2 3/8" diameter

Diameter of furnace, top 5'-1 1/2" bottom 5'-10" length of furnace 4'-3 1/2" thickness of plates 9/16" description of joint Lap.

Thickness of furnace crown plates 19/32" stayed by Rod stays 2 3/8" diameter. working pressure of shell by rules 56 lbs

Working pressure of furnace by rules 56 lbs. diameter of uptake 20" thickness of plates 5/8" thickness of water tubes 1/2"

SPARE GEAR. State the articles supplied:— Crank shaft, propeller shaft, 4 propeller blades connecting rod top and bottom end brasses and bolts, Air circulating pump rods. Main bearing & coupling bolts. Feed. Bilge & donkey pump valves. Piston springs, Bolts, nuts & plates assorted.

The foregoing is a correct description,

Manufacturer. David W. Henderson & Co.

General Remarks (State quality of workmanship, opinions as to class, &c. The above mentioned

Engines and Boilers are now completed on board. The Machinery is in my opinion of good workmanship and in a safe and good working condition and eligible to be noted in the Society's Register Book. \*L.M.C. 11.83.

The amount of Entry Fee .. £ 2 : 0 : 0 received by me, Special .. £ 33 : 4 : 0 Donkey Boiler Fee .. £ 0 : 0 : 0 Certificate (if required) .. £ 0 : 0 : 0 4/11/83 To be sent as per margin. (Travelling Expenses, if any, £ ..)

Committee's Minute FRIDAY 9 NOV 1883

Submitted for the audit & signed by me 9/11/83 J. M. Henderson Engineer Surveyor to Lloyd's Register of British & Foreign Shipping. Glasgow District