

# Record of New Machinery

## REPORT ON MACHINERY.

3238

No. 3238  
 No. in Survey held at not Surveyed (Belfast) Date, first Survey FRIDAY 30 JULY 1886  
 Reg. Book. 190 on the Iron Screw Steamer "Africa" Last Survey 18  
 Master A. Simonds Built at Birkenhead By whom built David Bros Tons 1717  
 Engines made at Harland & Wolff By whom made Harland & Wolff When built 1871  
 Boilers made at Belfast By whom made Harland & Wolff when made 1886  
 Registered Horse Power 150 Owners African S.S. Co Port belonging to London

### ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing  
 Diameter of Cylinders 27" & 54" Length of Stroke 36 No. of Rev. per minute old Point of Cut off, High Pressure ✓ Low Pressure ✓  
 Diameter of Screw shaft 12" Diam. of Tunnel shaft 12" Diam. of Crank shaft journals 10" Diam. of Crank pin 10" size of Crank webs 11 1/2" x 6 3/4"  
 Diameter of screw 13'-6" Pitch of screw 13 ft mean No. of blades four state whether moveable no total surface 55 sq ft  
 No. of Feed pumps Two diameter of ditto 3" Stroke 24 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two diameter of ditto 3" Stroke 24 Can one be overhauled while the other is at work yes  
 Where do they pump from all bilges and fore peaks  
 No. of Donkey Engines ✓ Size of Pumps ✓ Where do they pump from ✓  
 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 4" Are they connected to condenser, or to circulating pump Circulating pump  
 How are the pumps worked from levers connected to both engines  
 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 ✓ 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 1st July 1886 in Hamilton C.D.  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Main deck

### BOILERS, &c.—

Number of Boilers Two Description Single ended Multitubular Whether Steel or Iron Steel (Siemens)  
 Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test stated by Builders  
 Description of superheating apparatus or steam chest none fitted  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately ✓  
 Area of square feet of fire grate surface in each boiler 41 Description of safety valves Cockburns No. to each boiler Two  
 Area of each valve 10.2 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 12" Diameter of boilers 11'-9"  
 Length of boilers 9'-9" description of riveting of shell long. seams 66 lb strap 66 lb Riv circum. seams 66 lb Riv Lap Thickness of shell plates 1/4"  
 Diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 4.34" Lap of plating 4 1/2"  
 Percentage of strength of longitudinal joint ✓ working pressure of shell by rules ✓ size of manholes in shell 12" x 16"  
 No. of compensating rings ✓ No. of Furnaces in each boiler Two  
 Inside diameter 3'-6" length, top 6'-8" bottom 6'-8" thickness of plates 17/32" description of joint Lap & Single Riv if rings are fitted no  
 Shortest length between rings ✓ working pressure of furnace by the rules ✓ combustion chamber plating, thickness, sides 5/8" back 5/8" top 5/8"  
 No. of stays to ditto, sides 9 x 9 1/2" back 8 1/2 x 9 1/2" top 9 x 9 1/2" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules ✓  
 Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules ✓ end plates in steam space, thickness 5/8"  
 No. of stays to ditto 15" x 15" how stays are secured nuts & washers working pressure by rules ✓ diameter of stays at smallest part 2 5/8"  
 working pressure by rules 14" dia x 1/4" Front plates at bottom, thickness 1/16" Back plates, thickness 5/8"  
 Shortest pitch of stays ✓ working pressure by rules ✓ Diameter of tubes 3 1/4" pitch of tubes 4 1/2" & 4 1/2" thickness of tube plates, front 1/16" back 1/16" how stayed Subs pitch of stays 9 x 13 1/2" width of water spaces 1 1/4"  
 Diameter of Superheater or Steam chest ✓ length ✓ thickness of plates ✓ description of longitudinal joint ✓ diam. of rivet holes ✓  
 No. 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 ✓

Old Donkey Boiler has been repaired and valves loaded to 50 lbs. Common vertical fitted on upper deck.

Lloyd's Register  
 Foundation  
 BEL53-0295



**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 :—

The foregoing is a correct description,

Manufacturer.

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

*The rest of NEWS 86 in black  
also particulars of engine shown  
be made M. 3/8/86*

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

Special .. £ : : \

Donkey Boiler Fee .. £ : : \

Certificate (if required) .. £ : : 18

To be sent as per margin.

(Travelling Expenses, if any, £ \_\_\_\_\_)

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

Committee's Minute

TUESDAY 3 AUGUST 1886

