

# REPORT ON MACHINERY.

No. 45921

Port of Newcastle-on-Tyne

WED. 7 OCT 1903

Received at London Office

No. in Survey held at Newcastle

Date, first Survey Sep. 24 '02 Last Survey Sep 30 1903

Reg. Book. on the 5/9 "Yongala"

(Number of Visits 29)

Master J. Sims Built at Newcastle By whom built Armstrong Whitworth & Co. Tons { Gross 3664 Net 1957 When built 1903

Engines made at Newcastle By whom made Walsworth Shipway & Eng. Co. when made 1903

Boilers made at Newcastle By whom made Walsworth Shipway & Eng. Co. when made 1903

Registered Horse Power \_\_\_\_\_ Owners Adelaide S. S. Co. Ltd Port belonging to Adelaide S.A.

Nom. Horse Power as per Section 28 690 Is Refrigerating Machinery fitted no Is Electric Light fitted no

ENGINES, &c. — Description of Engines Trip No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 32" 5 1/2" 84" Length of Stroke 54" Revs. per minute 75 Dia. of Screw shaft 16.25" Material of screw shaft Iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight no

Is the propeller boss no If the liner is in more than one length are the joints burned no If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive no If two liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 6'-0"

Dia. of Tunnel shaft 15.3904 as per rule 16.25 Dia. of Crank shaft journals 16.2621 as per rule 17.25 Dia. of Crank pin 17.25 Size of Crank webs 29" x 11 1/2" Dia. of thrust shaft under rollers 17.25 Dia. of screw 17'-9" Pitch of screw 22'-0" No. of blades 4 State whether moveable no Total surface 93.6

No. of Feed pumps 2 Diameter of ditto 5" Stroke 26" Can one be overhauled while the other is at work no

No. of Bilge pumps 2 Diameter of ditto 5" Stroke 26" Can one be overhauled while the other is at work no

No. of Donkey Engines 3 Sizes of Pumps 1 1/2" 1 1/2" 1 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps 2" 3" 3"

Engine Room 3' x 3 1/2" In Holds, &c. In No. 1 & 2 holds 3" in each, In No. 3 hold one 3 1/2" In tunnel with one 2 1/2"

No. of bilge injections 1 sizes 1 1/2" Connected to condenser to circulating pump no Is a separate donkey suction fitted in Engine room & size no 3 1/2"

Are all the bilge suction pipes fitted with roses no Are the roses in Engine room always accessible no Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship no Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no 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 no Are the blow off cocks fitted with a spigot and brass covering plate no

How are they protected no

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times no

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges no

Were stern tube, propeller, screw shaft, and all connections examined in dry dock no Is the screw shaft tunnel watertight no

Is it fitted with a watertight door no worked from upper platform

BOILERS, &c. — (Letter for record 5) Total Heating Surface of Boilers 12,410.5 Is forced draft fitted no

Description of Boilers Five simple end Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 27/2/03 Can each boiler be worked separately no Area of fire grate in each boiler 73.6 No. and Description of safety valves to boiler two spring valves Area of each valve 8.29 sq" Pressure to which they are adjusted 183 lbs Are they fitted with easing gear no

Least distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 15'-0" Length 11'-0" Material of shell plates S

Thickness 1 3/32" Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams lap joint long. seams double butt

Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 10" Lap of plates or width of butt straps 2 1/4"

Percentages of strength of longitudinal joint: rivets 93 plate 85 Working pressure of shell by rules 207 Size of manhole in shell 16 x 12

Description of compensating ring int. ribs No. and Description of Furnaces in each boiler 3 Cor. Material S Outside diameter 51"

Thickness of plain part: top 5/8" bottom 3/8" Thickness of plates: crown 3/8" bottom 3/8" Description of longitudinal joint butt No. of strengthening rings no

Working pressure of furnace by the rules 197 Combustion chamber plates: Material S Thickness: Sides 3/8" Back 3/8" Top 3/8" Bottom 15/16"

Working pressure of stays to ditto: Sides 9 3/4" x 8 3/4" Back 9 1/4" x 9 1/4" Top 9 3/4" x 8 3/4" If stays are fitted with nuts or riveted heads no Working pressure by rules 187

Material of stays S Diameter at smallest part 1 5/8" Area supported by each stay 85.2 sq" Working pressure by rules 213 End plates in steam space: Material S Thickness 1 1/4" Pitch of stays 18 1/2" x 15" How are stays secured dr. riv. Working pressure by rules 247 Material of stays S

Thickness at smallest part 6.1" Area supported by each stay 277 sq" Working pressure by rules 220 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 5/8" Greatest pitch of stays 16 1/2" Working pressure of plate by rules 186

Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 5/8" Material of tube plates S Thickness: Front 1 1/4" Back 3/4" Mean pitch of stays 9 1/2"

Working pressures across wide water spaces 14" Working pressures by rules 223 Girders to Chamber tops: Material S Depth and thickness of girder at centre 9 1/4" x 1 1/2" Length as per rule 32 1/4" Distance apart 8 3/4" Number and pitch of Stays in each 2. 9 3/4"

Working pressure by rules 199 Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked no

Material no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet no

Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

End plates: Thickness no How stayed no Working pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

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