

## REPORT ON MACHINERY.

No. 45921

Port of *Newcastle-on-Tyne*

WED. 7 OCT 1903

Received at London Office 19

No. in Survey held at *Newcastle*  
Reg. Book.Date, first Survey *Sep. 24 '02* Last Survey *Sep 30* 1903.(Number of Visits *29*)on the *S/S "Yongala"*Master *J. Sim* Built at *Newcastle*By whom built *Armstrong Whitworth & Co.*Tons { Gross *3664*  
Net *1957*  
When built *1903*Engines made at *Newcastle*By whom made *Walsingham Shipway & Eng. Co.*when made *1903*Boilers made at *Newcastle*By whom made *Walsingham 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 *Yes, ship's stores* Is Electric Light fitted *Yes*ENGINES, &c.—Description of Engines *Triple*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 *as per rule 16.44"* Material of *Iron*  
screw shaft *as fitted 18"*Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes*

Is the after end of the liner made water tight

the propeller boss *Yes* If the liner is in more than one length are the joints burned *Yes*

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 *Yes*

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush *6'-0"*Dia. of Tunnel shaft *as per rule 15.3904*  
*as fitted 16 1/2"*Dia. of Crank shaft journals *as per rule 16.2691*  
*as fitted 17 1/4"*Dia. of Crank pin *17 1/4"* Size of Crank webs *24" x 11 1/2"* Dia. of thrust shaft underbars *17 1/4"* Dia. of screw *17'-9"* Pitch of screw *22'-0"*No. of blades *4* State whether moveable *Yes* Total surface *936*No. of Feed pumps *2* Diameter of ditto *5"* Stroke *26"* Can one be overhauled while the other is at work *Yes*No. of Bilge pumps *2* Diameter of ditto *5"* Stroke *26"* Can one be overhauled while the other is at work *Yes*No. of Donkey Engines *3* Sizes of Pumps *1 1/2" 1 1/4" 1 1/2" 1 1/4" 1 1/2" 1 1/4"*

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

Engine Room *3' 3" 3' 3" 3' 3"*  
*After hold one 3 1/2" 2nd tunnel one 2 1/2"*In Holds, &c. *In No. 11 2 holds two 3" in each, 2nd*No. of bilge injections *1* sizes *1 1/2"* Connected to condenser *Yes* to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 3 1/2"*Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*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 *Below*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 *None* How are they protected *Yes*Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *Yes*Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *Yes*When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Now* Is the screw shaft tunnel watertight *Yes*Is it fitted with a watertight door *Yes* worked from *Upper Platform*BOILERS, &c.—(Letter for record *5*) Total Heating Surface of Boilers *12,410 sq* Is forced draft fitted *No*and Description of Boilers *Five single ended* Working Pressure *180 lbs* Tested by hydraulic pressure to *360 lbs*No. of test *27/2/03* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *73 sq* No. and Description of safety valves toboiler *Two spring valves* Area of each valve *8.29 sq* Pressure to which they are adjusted *183 lbs* Are they fitted with easing gear *Yes*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 *24-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *Lap joint* long. seams *1 1/2" flat riv.*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*No. 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 *3 5/8"* bottom *3 5/8"* Description of longitudinal joint *Welded* No. of strengthening rings *Yes*Working pressure of furnace by the rules *197* Combustion chamber plates: Material *S* Thickness: Sides *3/4"* Back *3/4"* Top *3/4"* Bottom *1 5/16"*No. of stays to ditto: Sides *9 3/4" x 8 3/4"* Back *9 3/4" x 9 3/4"* Top *9 3/4" x 8 3/4"* If stays are fitted with nuts or riveted heads *Nuts* 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 *dn. 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 *1 5/8"* Greatest pitch of stays *16 1/2"* Working pressure of plate by rules *186*Pitch 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 andThickness 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 *Yes* Can the superheater be shut off and the boiler workedseparately *Yes* Diameter *Yes* Length *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivetPitch of rivets *Yes* Working pressure of shell by rules *Yes* Diameter of flue *Yes* Material of flue plates *Yes* Thickness *Yes*Are they fitted with rings *Yes* Distance between rings *Yes* Working pressure by rules *Yes* End plates: Thickness *Yes* How stayed *Yes*Working pressure of end plates *Yes* Area of safety valves to superheater *Yes* Are they fitted with easing gear *Yes*

7000-266M



**DONKEY BOILER—** *A. Ince* 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 \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boilers \_\_\_\_\_

enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of ten \_\_\_\_\_

strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_

Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description \_\_\_\_\_

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 uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied: — *1/2 crank shaft one propeller shaft, one propeller blade, one piston rod, one air pump rod & bucket, two slide & pinches, two top end, two bottom connecting rod bolts and nuts, two main bearing bolts, one set coupling bolts one set feed and bilge pump valves, assorted bolts & nuts, two of various sizes*

The foregoing is a correct description,  
*A. Ince* Manufacturer.

Dates of Survey: During progress of work in shops — *1902. Sep. 24. Oct. 3. 10. 16. 22. Nov. 25. Dec. 5. 18. 1903. Jan. 13. 20. 27. Feb. 4. 16. 20. 25. 27. Mar. 2. 9. 12. 17. 24. Apr. 21. 28. May 5. 12. 19. 26. Jun. 2. 9. 16. 23. 30. Jul. 7. 14. 21. 28. Aug. 4. 11. 18. 25. Sep. 1. 8. 15. 22. 29. Oct. 6. 13. 20. 27. Nov. 3. 10. 17. 24. Dec. 1. 8. 15. 22. 29.*

During erection on board vessel — *21. 28. May. 12. June 18. Sep. 30.*

Total No. of \_\_\_\_\_ *29.*

Is the approved plan of main boiler forwarded herewith *no*

“ “ “ donkey “ “ “ “ *✓*

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

*The machinery of this vessel has been built under special survey, the materials and workmanship are sound and good and under the vessel class in my opinion to have record of + L.M.C. 9.03*

*9*

It is submitted that  
 this vessel is eligible for  
**THE RECORD** *L.M.C. 9.03. ELEC: LIGHT.*

*Ans.*  
*7.10.03*  
*7.10.03*

The amount of Entry Fee: £ *3* : : : When applied for, *6 OCT 1903*

Special .. £ *54.10* : : : When received, *8.10.03*

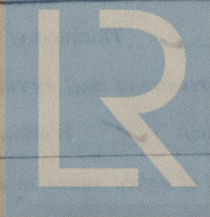
Donkey Boiler Fee .. £ : : : *9.10.03*

Travelling Expenses (if any) £ : : : *19*

Committee's Minute *FRI. 9 OCT 1903*

Assigned *+ L.M.C. 9.03*

*G. A. S. H. K.*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships



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 Foundation

MACHINERY CERTIFICATE  
 WRITTEN.

Newcastle-on-Tyne.

Certificate (if required) to be sent to