

# REPORT ON MACHINERY.

NOV 28 1901

Port of Newcastle-on-Tyne Received at London Office

Survey held at Newcastle-on-Tyne Date, first Survey Oct 12 1900 Last Survey Nov 20 1901  
Book. (Number of Visits 26)

on the S.S. BARALONG Tons { Gross 4184  
Net 2684

Builder P.G. Greggans Built at Newcastle By whom built Armstrong Whitworth & Co. When built 1901-11

Machinery made at Newcastle By whom made The Wallsend Shipway & Ltd when made 1901-11

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Registered Horse Power Owners Bucknall Bros. Port belonging to London

Horse Power as per Section 28 535 Is Refrigerating Machinery fitted no Is Electric Light fitted yes

MAKINGES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

No. of Cylinders 28 Length of Stroke 48" Revs. per minute 76 Dia. of Screw shaft 14 3/8" Lgth. of stern bush 5' 4"

Dia. of Tunnel shaft 13 1/2" Dia. of Crank shaft journals 13 1/2" Dia. of Crank pin 14 3/4" Size of Crank webs 9 3/4 x 22" Dia. of thrust shaft under

of Feed pumps 2 Diameter of ditto 3 1/2 x 2 1/2 x 10" Stroke ✓ Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes

of Donkey Engines 2 duplex Sizes of Pumps 8 x 5 x 10, 10 x 11 x 9 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room four 3 1/2", one in tunnel 3 1/2" In Holds, &c. two 3 1/2" dia in nos 1-2-3 & 4 holds

of bilge injections 1 sizes 9 1/2" Connected to condenser, or to circulating pump no Is a separate donkey suction fitted in Engine room & size yes 3 1/2"

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 none

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

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

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

at pipes are carried through the bunkers bilge pipes How are they protected wood casing

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

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 8.11.01 Is the screw shaft tunnel watertight yes

it fitted with a watertight door yes worked from upper deck.

BOILERS, &c.— (Letter for record 7) Total Heating Surface of Boilers 7599 sq ft Is forced draft fitted yes

and Description of Boilers 3 Mult. Single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

of test 28.2.01 Can each boiler be worked separately yes Area of fire grate in each boiler 48 sq ft No. and Description of safety valves to

each boiler 2 direct spring Area of each valve 8.29 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

smallest distance between boilers or uptakes and bunkers 18" Mean dia. of boilers 14.6" Length 12.0" Material of shell plates Steel

Thickness 1 1/2" Range of tensile strength 29.32 tons Are they welded or flanged no Descrip. of riveting: cir. seams D.T.R long. seams D.B.S., T.R

diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18 3/8"

percentages of strength of longitudinal joint rivets 86.9 Working pressure of shell by rules 183 lbs Size of manhole in shell 16 x 12"

of compensating ring 6 1/2 x 17 1/2" No. and Description of Furnaces in each boiler 3 Morrison's Material Steel Outside diameter 48"

length of plain part top 5" Thickness of plates crown 5" Description of longitudinal joint welded No. of strengthening rings none

working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1"

pitch of stays to ditto: Sides 9 1/2 x 9 1/2" Back 9 x 10" Top 8 1/2 x 10" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs

material of stays iron steel Diameter at smallest part 1 3/2" Area supported by each stay 90 sq in Working pressure by rules 183 lbs End plates in steam space:

material Steel Thickness 1 1/4" Pitch of stays 19 1/2, 19 1/2" How are stays secured D.N.W Working pressure by rules 184 lbs Material of stays Steel

diameter at smallest part 3 7/8" Area supported by each stay 380 sq in Working pressure by rules 184 lbs Material of Front plates at bottom Steel

thickness 3/32" Material of Lower back plate Steel Thickness 3/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 182 lbs

diameter of tubes 2 1/2" Pitch of tubes 3 7/8 x 3 5/8" Material of tube plates Steel Thickness: Front 3/32" Back 3/4" Mean pitch of stays 7 1/2"

pitch across wide water spaces 13" Working pressures by rules 186 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9 x 3, 2 plates Length as per rule 33 1/2" Distance apart 10" Number and pitch of Stays in each two 8 3/4"

working pressure by rules 186 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

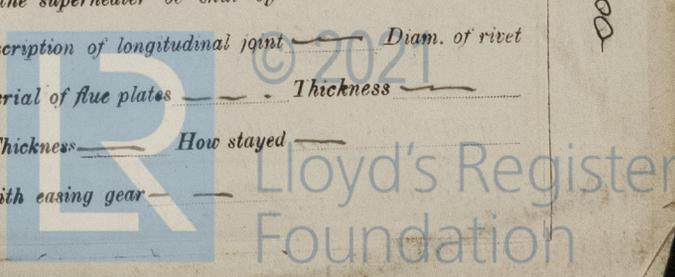
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

es Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

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**DONKEY BOILER**— No. *none* 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:— *Two top studs main bearing studs bottom end bolts one set coupling bolts, one set feed bilge pump valves, one air & one circulation pump wd bucket valve, one valve spindle, one propeller shaft, two propeller bolts six propeller studs.*

The foregoing is a correct description,  
 FOR THE WALSBY SLIPWAY & ENGINEERING CO., LIMITED,  
 Manufacturer.

*26/01* *W. Lloyd* MANAGING DIRECTOR  
 Dates of Survey while building  
 During progress of work in shops— 1900. Oct. 12. Dec. 6. 1901. Jan. 10. Feb. 12. 22. 26. 28. Mar. 5. 20. 21. 28. Apr. 29. May 2. 7. 11. 24. July 22. 30. Aug 6. 14. Sept. 19. Oct. 22. 24. 30. Nov. 18. 21. 16. 18. 19. 20  
 Total No. of visits *36* Is the approved plan of main boiler forwarded herewith *✓*  
 " " " donkey " " " " *✓*

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

Material of screw shaft *Bar 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 in the propeller boss *yes* If the liner is in more than one length are the joints burned *✓*  
 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 & non-corrosive *✓* If two liners are fitted, is the shaft lapped or protected between the liners *yes*

*The machinery of this vessel has been constructed & fitted on board under Special Survey, the workmanship is sound & good. The machinery has been tried under steam as required by Rules of L.M.C., 11-01 & is in my opinion eligible for the record of +L.M.C., 11-01 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. +L.M.C. 11.01. F.D. Rec. light

*W.S.* 28.11.01  
*C.M.* 28.11.01

The amount of Entry Fee... £ 3 : 00 When applied for,  
 Special ... £ 46 : 15 : 00 25.11.1901  
 Donkey boiler Fee ... £ : : When received,  
 Travelling Expenses (if any) £ : : 29/11/01

*Robert Haig*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute **FRI. NOV 29 1901**  
 Assigned *+L.M.C. 11.01*



Machinery Certificate

Certificate (if required) to be sent to...

MACHINERY CERTIFICATE WRITTEN