

REPORT ON MACHINERY.

NOV 28 1901

Port of *Newcastle-on-Tyne.*

Received at London Office

To, in 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*Master *P. G. Greggs*Built at *Newcastle*By whom built *Armstrong Whitworth & Co.*When built *1901-11*Lines made at *Newcastle*By whom made *The Wallsend Shipway & Ltd*when made *1901-11*Machinery made at *Newcastle*By whom made *The Wallsend Shipway & Ltd*when made *1901-11*

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*

FINES, &c.—Description of Engines

*Triple*No. of Cylinders *3*No. of Cranks *3*No. of Cylinders *28 46 77*Length of Stroke *48"*Revs. per minute *76*Dia. of Screw shaft *as per rule 14 3/8"*Lgth. of stern bush *5' 4"*Dia. of Tunnel shaft *as per rule 13 1/2"*Dia. of Crank shaft journals *as per rule 13 1/2"*Dia. of Crank pin *14 3/4"*Size of Crank webs *9 3/4 x 22"*

Dia. of thrust shaft under

Revs. *14 1/2*Dia. of screw *16' 0"*Pitch of screw *19' 0"*No. of blades *4*State whether moveable *yes*Total surface *90.8 sq ft*No. of Feed pumps *2 Neils*Diameter of ditto *3 1/2 x 2 1/2"*Stroke *✓*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *4 1/2"*Stroke *27"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *2 duplex*Sizes of Pumps *8' 5" x 10", 10' 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*

old well one 3 1/2", Tunnel well one 4"

No. of bilge injections *1*sizes *9 1/2"*Connected to condenser, or to circulating pump *pump*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*all pipes are carried through the bunkers *bilge pipes*How are they protected *wood casings*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 *8.11.07*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*No. and Description of Boilers *3 Mult. Single ended*Working Pressure *180 lbs*Tested by hydraulic pressure to *360 lbs*No. of test *28.2.07*Can each boiler be worked separately *yes*Area of fire grate in each boiler *48 sq ft*

No. and Description of safety valves to

No. of 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*least distance between boilers or uptakes and bunkers *18"*Mean dia. of boilers *14' 6"*Length *12' 0"*Material of shell plates *Steel*Thickness *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' 12"*No. of compensating ring *6 1/2 x 1 1/2"*No. and Description of Furnaces in each boiler *3 Morrisons*Material *Steel*Outside diameter *48"*

Length of plain part

Thickness of plates *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' 10"*Top *8 3/4 x 10"*If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *180 lbs*Material of stays *Stainless 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 x 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 1/2"*Area supported by each stay *380 sq in*Working pressure by rules *184 lbs*Material of Front plates at bottom *Steel*Thickness *3/2"*Material of Lower back plate *Steel*Thickness *3/2"*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 1/2 x 3 5/8"*Material of tube plates *Steel*Thickness: Front *3/2"*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' 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

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

Lloyd's Register

Foundation

009301-009310-0183

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 stirs main bearing stirs bottom end bolts one set coupling bolts, one set feed sledge pump valves, one air & one circulation pump and bucket valve, one valve spindle, one propeller shaft, two propeller bolts six propeller studs.*

The foregoing is a correct description,
FOR THE WALSBY SLIDWAY & 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. 15. 24. July 22. 30. Aug. 6. 14. Sept. 19. Oct. 22. 24. 30. Nov. 18. 21. 16. 18. 19. 30
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 and 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 & found satisfactory & 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.
elec. light

R.S.
28.11.01
C.M.
28.11.

The amount of Entry Fee. £ *3* : *00* When applied for, _____
Special £ *46* : *15* : *25* : *11* : *1901*
Donkey Boiler Fee £ _____ : _____ : _____ : _____ : _____
Travelling Expenses (if any) £ _____ : _____ : _____ : _____ : _____
When received, *29/11/01*

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

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