

REPORT ON MACHINERY.

No. 47111

Port of *Newcastle-on-Tyne*

Received at London Office

10

No. in Survey held at *Newcastle*Date, first Survey *Oct. 30th '03*Last Survey *Jan 2nd 1904*

Reg. Book.

on *1/32* *"S/S 'Berne'"*

(Number of Visits)

Tons } Gross *3039*
Net *1899*
When built *1904*Master *A. Guy*Built at *Newcastle*By whom built *Armstrong Whitworth & Co.*Engines made at *Newcastle*By whom made *Walsby & Shipway & Co.*when made *1904*Boilers made at *Newcastle*By whom made *Walsby & Shipway & Co.*when made *1904*

Registered Horse Power

Owners *Burmah Oil Co. Ltd.*Port belonging to *Rangoon*

Nom. Horse Power as per Section 28

*265*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *yes*ENGINES, &c.—Description of Engines *Triple*No. of Cylinders *3* No. of Cranks *3*Dia. of Cylinders *22" 37" 61"* Length of Stroke *42"* Revs. per minute *70*Dia. of Screw shaft *as per rule 12 3/4"* Material of screw shaft *Steel*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

in the propeller boss *yes* If the liner is in more than one length are the joints banded *✓*

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 *✓*Length of stern bush *4' 9"*Dia. of Tunnel shaft *as per rule 11.16"*Dia. of Crank shaft journals *as per rule 11.71"*Dia. of Crank pin *12 1/4"*Size of Crank webs *24 1/2" x 8"*

Dia. of thrust shaft under

collars *12 1/4"* Dia. of screw *16-0"* Pitch of screw *17-3"*No. of blades *4*State whether movable *no*Total surface *78 1/2"*No. of Feed pumps *2*Diameter of ditto *3 1/4"*Stroke *22"*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *3 1/4"*Stroke *22"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *2*Sizes of Pumps *6x4x6, 6x7 1/2x6, 7x4x6, 4x3x4*

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

In Engine Room *Two 3" for 3 1/2" Three 2 1/2" in oil well + Two 3" in fuel bunkers*In Holds, &c. *One 5" suction in each cargo tank*

One 3" suction in cargo hold, one steam suction in each pump room.

No. of bilge injections *1* sizes *6"*Connected to condenser or to circulating pump *yes*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 faced sufficiently high on the ship's side to be seen without lifting the stowhold 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 *none*How are they protected *✓*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 *✓*worked from *Engines fitted with*BOILERS, &c.— (Letter for record *✓*) Total Heating Surface of Boilers *4130 1/2*Is forced draft fitted *no*No. and Description of Boilers *Two simple vertical*Working Pressure *180 lb*Tested by hydraulic pressure to *260 lb*Date of test *23/2/04*Can each boiler be worked separately *yes*Area of fire grate in each boiler *61 1/2 1/2*

No. and Description of safety valves to

each boiler *Two spring valves*Area of each valve *7.07 1/2*Pressure to which they are adjusted *183 lb*Are they fitted with easing gear *yes*Smallest distance between boilers or uptakes and bunkers or woodwork *18" to 24" 1/2*Mean dia. of boilers *14-0*Length *11-6*Material of shell plates *S*Thickness *1 1/2"*Range of tensile strength *29-32*Are they welded or flanged *no*Descrip. of riveting: cir. seams *lap joint*long. seams *1 1/2" to 2"*Diameter of rivet holes in long. seams *1 1/2"*Pitch of rivets *9"*Lap of plates or width of butt straps *19 3/4"*Per centages of strength of longitudinal joint *93*Working pressure of shell by rules *215*Size of manhole in shell *12 x 16*Size of compensating ring *McNair*No. and Description of Furnaces in each boiler *3 horizontal*Material *S*Outside diameter *45"*Length of plain part *top 35 1/2"*Thickness of plates *bottom 36 1/4"*Description of longitudinal joint *weld*No. of strengthening rings *✓*Working pressure of furnace by the rules *188*Combustion chamber plates: Material *S*Thickness: Sides *1/2"*Back *1/2"*Top *1/2"*Bottom *3/4"*Pitch of stays to ditto: Sides *8 1/4" x 9 3/4"*Back *8 1/2" x 9 3/4"*Top *8 1/4" x 9 3/4"*Bottom *8 1/4" x 9 3/4"*If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *190*Material of stays *Iron*Diameter at smallest part *1 1/8"*Area supported by each stay *85.5 1/2*Working pressure by rules *208*

End plates in steam space

Material *S*Thickness *1 3/4"*Pitch of stays *16 1/2" x 19 3/4"*How are stays secured *d.n.w.*Working pressure by rules *250*Material of stays *S*Area supported by each stay *331 1/2*Working pressure by rules *222*Material of Front plates at bottom *S*Thickness *1"*Greatest pitch of stays *13 1/2" 15"*Working pressure of plate by rules *184*Diameter of tubes *3"*Pitch of tubes *4 1/2" x 4 1/2"*Material of tube plates *S*Thickness: Front *1"*Back *3/4"*Mean pitch of stays *8 1/2"*Pitch across wide water spaces *13 1/2"*Working pressure by rules *210*Girders to Chamber tops: Material *S*

Depth and

thickness of girder at centre *9 1/2"*Length as per rule *31 3/4*Distance apart *8 3/4*Number and pitch of Stays in each *2. 9 3/4*Working pressure by rules *196*Superheater or Steam chest; how connected to boiler *✓*

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

holes *✓*Pitch of rivets *✓*Working pressure of shell by rules *✓*Diameter of flue *✓*Material of flue plates *✓*Thickness *✓*If 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 *✓*

If not, state at once, and when, one will be sent.

Is a Report also sent on the Hull of the Ship?

1000-5-22—Copyrighted.

REP 4 47114

DONKEY BOILER— No. *1711* Description *Single ended horizontal*
Made at *Newcastle* By whom made *Watt and Simpson & Co* When made *29/1/04* Where fixed *Stikbold*
Working pressure *120 lbs* tested by hydraulic pressure to *240 lbs* No. of Certificate *6729* Fire grate area *30 sq* Description of safety valves *Spring*
No. of safety valves *2* Area of each *4 sq* Pressure to which they are adjusted *120 lbs* If fitted with casing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *10'-0"* Length *9'-0"* Material of shell plates *S* Thickness *3/16* Range of tensile strength *29-32* Descrip. of riveting long. seams *Lap with* Dia. of rivet holes *3/32* Whether punched or drilled *Drilled* Pitch of rivets *4 1/2*
Lap of plating *7 1/8"* Per centage of strength of joint *78* Thickness of shell plates *3/16* Radius of do. *1 1/2* No. of stays to do. *14 x 14 1/2*
Dia. of stays *2.51"* Diameter of furnace top *38"* Bottom *✓* Length of furnace *5'-9"* Thickness of furnace plates *3/16* Description of joint *As single riv.* Thickness of furnace crown plates *3/16* Stayed by *1 3/8" stays* Working pressure of shell by rules *123*
Working pressure of furnace by rules *131* Diameter of tubes *2 3/4* Thickness of tubes *1 1/8" 13 3/4* Thickness of tubes *5/16*

SPARE GEAR. State the articles supplied:— *One perpendicular shaft, two top end & two bottom end con. rods, bolts & nuts, two main bearing bolts, one set emptying bolts, one set feed & large pump valves, assorted bolts & nuts, 2000 of various sizes.*

The foregoing is a correct description.

M. M. Murray Manufacturer.

Dates of Survey: During progress of work in shops:— *1903 Oct. 20, Nov. 17, Dec. 16, 1904 Jan. 6, 15, 20, 28, Feb. 12, 16, 26, 29, April 11, May 27, June 2.*
During erection on board vessel:—
building:—
Total No. of:— *16*

Is the approved plan of main boiler forwarded herewith *Yes*

" " donkey " " " *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c.) *This vessel is built to carry oil in bulk. The main and donkey boilers are fitted to burn liquid fuel on with Echu and Ruschmann patent burners. Two 15 ton evaporators are fitted to make up lots of water due to spraying the oil. The oil fuel is carried in bunkers at fore end of stikbold in way of donkey boiler but not underneath engines or boilers. The donkey boiler in way of bunkers is thoroughly insulated being covered thickly with non-conducting composition. Two duplex pumps are fitted in stikbold to pump the oil fuel from bunkers to sitting tanks in fiddly, and for pumping out oil well in way of bunkers. The oil to be used for fuel is Burmah oil which to have a flash point not less than F 200.*

The machinery of this vessel has been constructed under special survey, the materials and workmanship are sound and good, and under the vessel eligible in my opinion to have record of L.M.C. 6. 14.

L.M.C. 6. 04 ELEC: LIGHT.
Fitted for Liquid fuel 6. 04

W. J. M.

W. J. M.

The amount of Entry Fee.. £ *2* : : When applied for.
Special £ *33* : *5* : :
Donkey Boiler Fee £ : : : When received,
Travelling Expenses (if any) £ : : : *11* : *19* : :

G. A. Sata

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

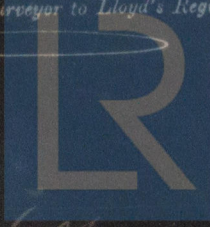
Committee's Minute

Assigned

+ L.M.C. 6. 04

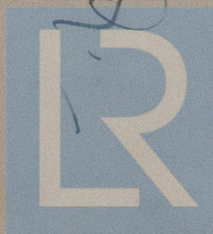
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THE CERTIFICATE
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