

2 DONKEY BOILERS Description *Vertical Lin crop tubes*
Made at *B. Hartlepool* By whom made *B. Gray & Co. Ltd.* When made *3.99* Where fixed *Stokehold*
Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *2672* Fire grate area *286* Description of safety valves *Spring*
No. of safety valves *2* Area of each *7.07* Pressure to which they are adjusted *82 1/2* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *7'-0"* Length *14'-0"* Material of shell plates *Steel* Thickness *15/32*
Description of riveting long. seams *Lap double* Diameter of rivet holes *7/8* Whether punched or drilled *Punches* Pitch of rivets *2 3/4*
Lap of plating *4 1/4* Per centage of strength of joint Rivets *79.4* Thickness of shell crown plates *19/32* Radius of do. *8.6* No. of Stays to do. *7*
Dia. of stays *2* Diameter of furnace Top *4.11* Bottom *6.1* Length of furnace *6.3* Thickness of furnace plates *5/8* Description of joint *Lap single* Thickness of furnace crown plates *5/8* Stayed by *Same as Shell* Working pressure of shell by rules *87 1/2*
Working pressure of furnace by rules *81.2* Diameter of uptake *15* Thickness of uptake plates *3/8* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *2 Main bearing bolts & nuts, 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 Set of Shafts coupling bolts & nuts, 1 Set of feed & 1 Set of tilge pump valves, Spring for piston Safety & escape valves, 1 main feed check valve, propeller shaft piston bolts, 6 boiler tube nuts bolts & girders.*
The foregoing is a correct description, FOR THE CENTRAL MARINE ENGINE WORKS
Manufacturer. *William Brown*

Dates During progress of work in ship: 1898 Dec. 14, 15, 19, 20, 21, 22, 30, 31. 1899 Jan. 5, 6, 9, 12, 14, 16, 17, 19, 20, 23, 24, 25, 26, 27, 30, 31. Feb. 2, 3, 10, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 27, 28. Mar. 1, 3, 6, 7, 8, 15, 17, 21, 23. Apr. 5, 10, 14, 18, 21.
of Survey During erection on board vessel: 10, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 27, 28. Mar. 1, 3, 6, 7, 8, 15, 17, 21, 23. Apr. 5, 10, 14, 18, 21.
while building Total No. of visits *57*

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

ENGINES—Length of stern bush *4.9"* Diameter of crank shaft journals *11.39* as per rule *12"* Diameter of thrust shaft under collars *13"*
BOILERS—Range of tensile strength *27 1/2* Are they welded or flanged *Both* DONKEY BOILERS—No. *2* Range of tensile strength *27 1/2*

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

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

The machinery has been specially surveyed during construction. The material and workmanship good and renders the vessel eligible in my opinion to have the Record + L.M.C. 4-9 in the Register Book of the Society.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 4-9

A.C.H.

1.5.99

Richard Hirst

2.5.99

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

The amount of Entry Fee. £ *2* : : When applied for, *28.4.99*
Special £ *34* : *13* : : When received, *29.4.99*
Donkey Boiler Fee £ *4* : *4* : :
Travelling Expenses (if any) £ : : :

Committee's Minute

TUES. 2 MAY 1899

Assigned

+L.M.C. 4.99

MACHINERY CERTIFICATE WRITTEN



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