

DONKEY BOILER— No. *one* Description *behind single ended*
 Made at *Welford* By whom made *Harland & Wolff L^{td}* When made *1901* Where fixed *Main Deck*
 Working pressure *104 lbs* Made by hydraulic pressure to *208 lbs* No. of Certificate *299* Fire grate area *33 sq ft* Description of safety valves *Direct Spring*
 No. of safety valves *two* Area of each *5 1/4 sq in* Pressure to which they are adjusted *104 lbs* Not fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *10'-6"* Length *9'-6"* Material of shell plates *Steel* Thickness *3/32"* Range of tensile strength *28-32* Descrip. of riveting long. seams *Butt Double* Dia. of rivet holes *1"* Whether punched or drilled *Punched* Pitch of rivets *4 1/4"*
 Rivets *Butt* Per centage of strength of joint *104* Rivets *22-5* Thickness of shell plates *23/32"* Radius of do. *1/2"* Pitch of Stays to do. *15 1/2 x 15*
 Dia. of stays *2 1/2"* Diameter of furnace Top *37 1/2"* Bottom *37 1/2"* Length of furnace *6'-5"* Thickness of furnace plates *3/32"* Description of joint *D. Butt* Thickness of furnace crown plates *1/2"* Stayed by *Seven stay 1 1/2 x 1 1/2 inch* Working pressure of shell by rules *28 lbs*
 Working pressure of furnace by rules *135 lbs* Diameter of uptake *4 1/2"* Thickness of uptake plates *Front 23/32"* Thickness of water tubes *4 1/2 x 4 1/2"*

SPARE GEAR. State the articles supplied:— *Propeller Shaft, Thrust Shaft, Crank Shafts 2, Propeller blades, Propeller Cross, 3 eccentric straps, 4 eccentric rods, set valve spindle & saddle blocks, 1 cross head, 2 cross bars, sets piston packing rings for each of cylinders with pump. Complete set of spare parts for all pumps, fan engines ect. and a considerable quantity of other spare parts above are*
 The foregoing is a correct description, *Harland & Wolff L^{td} Manufacturer* Requirements.

Dates During progress of work in shops— *1900. Jan 25, Feb 5-13-15-22, March 2, 4, 15, 19, 23, 26-27, April 3, 5, 9, 12, 23, 27, May 8, 31*
 During erection on board vessel— *June 12, 15, 20, 24, 29, July 14, 26, 31, Sept. 3, 11, 16, 27, Oct. 2, 9, 12, 14, 20, 22, 29, Nov 12, 16, 21, 23*
 Total No. of visits *117* Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

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

Material of screw shaft *Super Steel* the screw shafts fitted with *three* continuous liners the whole length of the stern tubes *Yes*
 Is the after end of the liners made water tight in 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 *Yes*

The engines and boilers of this vessel have been constructed under Special Survey, and in accordance with the approved plans. The engines are of the finest usual quadruple expansion, four crank, balanced type. The shafting throughout is of the best hydraulically pressed mild steel of dimensions in excess of our requirements. The propeller shafts, which were formerly carried outboard, to frames of A section, are now supported by the main frames of the vessel, which have been "boxed out" for this purpose. The main steam pipes are of cold drawn steel, and have been tested by hydraulic to 60 lbs per sq. inch suitable expansion joints, and strongly built steel plate thrust blocks have been fitted in each range of piping. All the pumps are of the independent type, none being attached to the main engines. On the trial trip, the main engines worked most satisfactorily. There are two sets of air pumps (two in a set) of the American "Blake" type, each 24 diam. by 18 stroke, driven by direct acting air engines. These pumps were fitted at the request of the owners. On a trial maximum vacuum obtained, was 2 3/4 inches, with the main engines working 48 revolutions. In my opinion, the machinery is eligible to be recorded + L.M.C. 8-01 + N.E. & B. 1901. Forced Draft Electric light and N.D. Boiler!

The amount of Entry Fee. . . £ 3 : - : When applied for, *24-8-1901*
 Special £ 153-15 : :
 Donkey Boiler Fee £ : : : When received, *29-8-1901*
 Travelling Expenses (if any) £ : : :

R. J. Bennett
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships
 It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 8,01 + N.E. & B. 1901
 27.8.01

Committee's Minute
 Assigned
 + L.M.C. 8,01
 + N.E. & B. 8,01
 MACHINERY CERTIFICATE WRITTEN 30-8-01
 NDB 01
 70

Certificate (if required) to be sent to Committee's Minute.

