

REPORT ON MACHINERY. 5068

No. 5068 Port of Dundee
 No. in Survey held at Dundee Date, first Survey March 16th Received at London MONDAY 28 NOV 1887
 Reg. Book. Last Survey Nov. 21st 1887
 on the Iron Screw Steamer Portland (Number of Visits) 949
 Tons 1123
 Master John Crawford Built at Dundee By whom built W. B. Thompson & Co. Ltd When built 1887
 Engines made at Dundee By whom made W. B. Thompson & Co. Ltd when made 1887
 Boilers made at Dundee By whom made W. B. Thompson & Co. Ltd when made 1887
 Registered Horse Power 260 Owners Hyde Shipping Co. Port belonging to Glasgow

ENGINES, &c.—
 Description of Engines Triple expansion Surface Condensing.
 Diameter of Cylinders 22 1/2" x 39" x 61" Length of Stroke 48" No. of Rev. per minute 72 Point of Cut off, High Pressure 6 var. Low Pressure 6 variable
 Diameter of Screw shaft 12 1/4" Diam. of Tunnel shaft 11 3/4" Diam. of Crank shaft journals 12 1/2" Diam. of Crank pin 12 1/2" size of Crank webs 8" x 22 1/4"
 Diameter of screw 14 ft Pitch of screw 2 1/2 ft 6 ins No. of blades 4 state whether moreable Yes total surface 64 sq ft.
 No. of Feed pumps 2 diameter of ditto 4" Stroke 30" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 diameter of ditto 4" Stroke 30" Can one be overhauled while the other is at work Yes
 Where do they pump from from all holds and Engine Room.
 No. of Donkey Engines Two Size of Pumps 8 1/2" x 8" x 6" Where do they pump from all holds, Eng. Room, Sea, frame tanks, hatchell to boiler, on deck, to forepeak, davney boiler and overboard.
 Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 No. of bilge injections One and sizes 8" valve Are they connected to condenser, or to circulating pump centrifugal pump.
 How are the pumps worked by low pressure lever.
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 Are 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
 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 Forward tank and bilge pipes. How are they protected by wood casing.
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes
 When were stern tube, propeller, screw shaft, and all connections examined September 14th 1887
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from deck and engine room.

BOILERS, &c.—
 Number of Boilers Two Description Circular tubular Whether Steel or Iron Steel
 Working Pressure 156 lb Tested by hydraulic pressure to 312 lb. Date of test 5/8/87
 Description of ~~superheating apparatus~~ steam chest Circular, vertical.
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately Yes
 No. of square feet of fire grate surface in each boiler 45 sq ft Description of safety valves Spring No. to each boiler Two
 Area of each valve 7.07 sq" Are they fitted with easing gear Yes No. of safety valves to superheater Yes area of each valve Yes
 Are they fitted with easing gear Yes Smallest distance between boilers and ~~bunkers~~ chips side 2 ft 3 ins Diameter of boilers 13' 8"
 Length of boilers 11' 0" description of riveting of shell long. seams Double straps, tr. riv circum. seams Lap joint, d. riv. Thickness of shell plates 1 1/4"
 Diameter of rivet holes 1 5/16" whether punched or drilled Drilled pitch of rivets 8 1/4" Lap of plating 18 ins straps
 Percentage of strength of longitudinal joint 84 x 85.5 working pressure of shell by rules 160 lb size of manholes in shell 17" x 13"
 Size of compensating rings Mc Neil's patent No. of Furnaces in each boiler Three
 Outside diameter 3' 4" length, top 7' bottom 10' thickness of plates 17/32" description of joint For's corrugated flange rings are fitted No.
 Greatest length between rings Yes working pressure of furnace by the rules 162 lb combustion chamber plating, thickness, sides 17/32" back 17/32" top 17/32"
 Pitch of stays to ditto, sides 7" back 7 1/2" x 7" top 8" If stays are fitted with nuts or riveted heads None & was then working pressure of plating by rules 154 lb
 Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 158 end plates in steam space, thickness 13/16" x 13/16" double plate
 Pitch of stays to ditto 16" x 15" how stays are secured double nuts & wash. working pressure by rules 225 diameter of stays at smallest part 2 7/8" working pressure by rules 158 lb Front plates at bottom, thickness 13/16" Back plates, thickness 13/16"
 Greatest pitch of stays 7 1/2" working pressure by rules 158 lb Diameter of tubes 3 1/2" pitch of tubes 5 1/8" x 4 7/8" thickness of tube plates, front 7/8" back 3/4" how stayed serao stays pitch of stays 10 1/4" x 9 3/4" width of water spaces 7"
 Diameter of ~~Superheater~~ Steam chest 2' 6" length 3' 6" thickness of plates 7/8" iron description of longitudinal joint batt's traps diam. of rivet holes 1"
 Pitch of rivets 4" working pressure of shell by rules 158 lb diameter of flue Yes thickness of plates Yes If stiffened with rings Yes
 Distance between rings Yes working pressure by rules 158 lb end plates of ~~superheater~~ steam chest; thickness 1 1/2" how stayed by four stays
~~Superheater~~ steam chest; how connected to boiler flanged to shell

[Form No. 8-2000-17/8/16-T. 55.—Transfer Ink.]

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DONKEY BOILER—

Description

Vertical Steel

Made at Dundee

by whom made W. B. Thompson & Co. Ld.

when made 1887 where fixed On deck

Working pressure 60 lb tested by hydraulic pressure to 120 lb No. of Certificate 506 fire grate area 14 sq. ft description of safety

valves Spring No. of safety valves One area of each 7.07 sq. in if fitted with easing gear Yes if steam from main boilers can

enter the donkey boiler No diameter of donkey boiler 6' 6" length 12' 9" description of riveting Double riv. lap

Thickness of shell plates 1/2" diameter of rivet holes 7/8" whether punched or drilled Drilled pitch of rivets 2 3/4" lap of plating 4 1/2"

per centage of strength of joint 67 & 71 thickness of crown plates 13/16" stayed by seven solid stays, 2 1/4" dia

Diameter of furnace, top 4' 7 1/2" bottom 5' 4" length of furnace 7' 9" thickness of plates 9/16" description of joint Lap joint, single riv.

Thickness of furnace crown plates 9/16" stayed by seven solid stays, 2 1/4" dia working pressure of shell by rules 92 lb

Working pressure of furnace by rules 60 lb diameter of uptake 1' 6" thickness of plates 1/2" thickness of water tubes 7/16"

SPARE GEAR. State the articles supplied:—Two foot valves; two bucket valves; two delivery valves with studs & nuts, two lead valves & seats, one bilge valve & seat, two check valves; 1 set of coupling bolts; two spiral springs for safety valves & two for escape valves; two sets of furnace bars; four propeller blades and 12 studs and nuts; 12 g-lap screws; 24 cam screws; 12 piston bolts; two main bearing bolts & nuts; two top end & two bottom end bolts & nuts, and iron of various sizes.

The foregoing is a correct description, For W. B. THOMPSON & Co., Limited, Manufacturer.

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

The machinery of this vessel has been built under special survey and in accordance with the approved plans, sent herewith. The boilers are made of steel which according to the certificates annexed, is tested at the steel works by one of the Society's Surveyors with satisfactory result. The safety valves of all the boilers have been run under steam. Those of the main boilers blowing off at 150 lb p. sq. i. and that of the donkey boiler at 60 lb p. sq. i.

The material and workmanship are good. The machinery is in good condition and safe working order and this vessel is in my opinion eligible to be classed in the Register with the Notification

L. M. C. 11. 87

This submitted that this vessel is eligible to have the notification + done 11.87 recorded

29/11/87

Large blue ink scribble or signature.

The amount of Entry Fee .. £ 2 : : received by me, Special .. £ 33 : : Donkey Boiler Fee .. £ : : Certificate (if required) .. £ : : To be sent as per margin.

Nov 25th 1887

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

Committee's Minute

TUESDAY 29 NOV 1887

Handwritten signature.

