

REPORT ON MACHINERY. 5068

No. 5068

Port of *Dundee*

No. in Survey held at *Dundee*
Reg. Book.

Date, first Survey *March 16th* Received at London *MONDAY 28 NOV 1887*
Last Survey *Nov. 21st* 1887

(Number of Visits) *949*
Tons *1123*

on the *Iron Screw Steamer Portland*

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 *Glyde 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 *21 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, dunnage 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 *Foreward 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 *✓*
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 *✓* area of each valve *✓*
Are they fitted with easing gear *✓* 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 strap, h. 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*
Per centage 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 *✓* 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 *Nuts & washers* 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 & washers* 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 *✓* 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 *screw 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"* description of longitudinal joint *batt straps* diam. of rivet holes *1"*
Pitch of rivets *4"* working pressure of shell by rules *✓* diameter of flue *✓* thickness of plates *✓* If stiffened with rings *✓*
Distance between rings *✓* working pressure by rules *✓* 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*

DONKEY BOILER—

Description

Vertical Steel

Made at Dundee

by whom made

W. B. Thompson & Co. Ltd.

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 1/4"

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 feed 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 gaskets; 24 cam lever rollers; 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 steelworks 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 Registerbook with the Notification

L. M. C. 11. 87

This submitted that this vessel is eligible to have the notification + done 11. 87 recorded

28/11/87

The amount of Entry Fee .. £ 2 :

Special .. £ 33 :

Donkey Boiler Fee .. £ :

Certificate (if required) .. £ :

To be sent as per margin.

(Travelling Expenses, if any, £ ..)

received by me,

Nov 25th 1887

Committee's Minute

TUESDAY 29 NOV 1887

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



Lloyd's Register Foundation