

REPORT ON MACHINERY.

5788

No. 5788 Port of Dundee
 No. in Survey held at Dundee Date, first Survey 18 Sept. Last Survey 23 Nov. 1888
 Reg. Book. 410 on the Iron S.S. Mower (Number of Visits 15) Tons 949
602
 Master Wolveston Built at Sunderland By whom built Murray & Foster When built 1875
 Engines triple made at Dundee By whom made Gairley Bros & Co. when made 1888
 Boilers made at Dundee By whom made Gairley Bros & Co. when made 1888
 Registered Horse Power 110 Owners General Steam Navigation Co Port belonging to London

Received at London Office MON 3 DEC 1888

ENGINES, &c.—

Description of Engines Engines tripled by fitting a 16" cylinder on top the low pressure cylinder
 Diameter of Cylinders 16 x 26 x 52 Length of Stroke 33 No. of Rev. per minute _____ Point of Cut off, High Pressure 5/6 Low Pressure 5/6
 Diameter of Screw shaft _____ Diam. of Tunnel shaft _____ Diam. of Crank shaft journals _____ Diam. of Crank pin _____ size of Crank webs _____
 Diameter of screw _____ Pitch of screw _____ No. of blades _____ state whether moreable _____ total surface _____
 No. of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 No. of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____
 Where do they pump from _____
 No. of Donkey Engines _____ Size of Pumps _____ Where do they pump from _____
 Are all the bilge suction pipes fitted with roses _____ Are the roses always accessible _____ Are the sluices on Engine room bulkheads always accessible _____
 No. of bilge injections _____ and sizes _____ Are they connected to condenser, or to circulating pump _____
 How are the pumps worked _____
 Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the discharge pipes above or below the deep water line _____
 Are they each fitted with a discharge valve always accessible on the plating of the vessel _____ Are the blow off cocks fitted with a spigot and brass covering plate _____
 What pipes are carried through the bunkers _____ How are they protected _____
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times _____
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges _____
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock _____
 Is the screw shaft tunnel watertight _____ and fitted with a sluice door _____ worked from _____

BOILERS, &c.—

Number of Boilers One Description Circular tubular Whether Steel or Iron Steel, better of material (S)
 Working Pressure 150 lb Tested by hydraulic pressure to 300 lb Date of test 20/10/88
 Description of superheating apparatus or steam chest _____
 Can each boiler be worked separately _____ Can the superheater be shut off and the boiler worked separately _____
 No. of square feet of fire grate surface in each boiler 54.5 sq ft Description of safety valves Springs No. to each boiler Two
 Area of each valve 7.07 sq ft 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 12" Diameter of boilers 14' 0"
 Length of boilers 10' 6" description of riveting of shell long. seams double riv. d. stay circum. seams double riv. lap Thickness of shell plates 1 5/32
 Diameter of rivet holes 1 5/32 whether punched or drilled Drilled pitch of rivets 7 7/8 Lap of plating 16 7/8" straps
 Percentage of strength of longitudinal joint 84% & 85% working pressure of shell by rules 150 size of manholes in shell 17" x 13"
 Size of compensating rings 4" x 4" x 3/4" angle No. of Furnaces in each boiler Three
 Outside diameter 3' 7 3/4" length, top 7 bottom 7 thickness of plates 33/64 description of joint Purves if rings are fitted _____
 Greatest length between rings _____ working pressure of furnace by the rules 150 combustion chamber plating, thickness, sides 9/16" back 9/16" top 5/8"
 Pitch of stays to ditto, sides 7 1/2" back 7 1/2" top 7" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 172 Diameter of stays at smallest part 1 1/32 working pressure of ditto by rules 318 end plates in steam space, thickness 1 1/16"
 Pitch of stays to ditto 17 1/2" x 17 1/2" how stays are secured by double nuts working pressure by rules 150 diameter of stays at smallest part 2 7/8" working pressure by rules 190 Front plates at bottom, thickness 1 1/16" Back plates, thickness 1 3/16"
 Greatest pitch of stays 9" working pressure by rules _____ Diameter of tubes 3 3/4" pitch of tubes 5 1/8" x 5 1/8" thickness of tube plates, front 3/4" back 3/4" how stayed stay tubes pitch of stays 10 1/4" x 10 1/4" width of water spaces 6"
 Diameter of Superheater or Steam chest _____ length _____ thickness of plates _____ description of longitudinal joint _____ diam. of rivet holes _____
 Pitch of rivets _____ 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, or steam chest; thickness _____ how stayed _____
 Superheater or steam chest; how connected to boiler _____

Lloyd's Register Foundation

DUN113-0125

DONKEY BOILER— Description *Vertical Steel*
 Made at *Dundee* by whom made *Gourlay Bros. & Co.* when made *1888* where fixed *On deck*
 Working pressure *80 lb* tested by hydraulic pressure to *100 lb*. No. of Certificate *533* fire grate area *15 sq ft*. description of safety valves *Spring* No. of safety valves *Two* area of each *3.55 sq ft* if fitted with easing gear *Yes* if steam from main boilers can enter the donkey boiler *No* diameter of donkey boiler *5' 6"* length *11' 0"* description of riveting *Double riv. lap*
 Thickness of shell plates *3/8"* diameter of rivet holes *1/16"* whether punched or drilled *Drilled* pitch of rivets *2 3/8"* lap of plating *3 3/8"*
 per centage of strength of joint *71% x 75%* thickness of crown plates *1/16"* stayed by *7 solid stays; 2" dia*
 Diameter of furnace, top *4' 0"* bottom *4' 8 1/2"* length of furnace *6' 6"* thickness of plates *9/16"* description of joint *Single riv. lap*
 Thickness of furnace crown plates *17/32"* stayed by *7 solid stays; 2" dia.* working pressure of shell by rules *80 lb*
 Working pressure of furnace by rules *82 lb* diameter of uptake *10"* thickness of plates *3/8"* thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
Gourlay Brothers & Co Manufacturer.

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

These boilers have been built under special survey in accordance with the approved plans, which are annexed. The steel used in the construction is tested at the steelworks by one of the Society's Surveyors and the Certificates of Tests are enclosed. The safety valves have been set at the working pressure of resp. 150 lb and 80 lb, and one tested under steam. The workmanship and material are good and their use is, in my opinion, eligible to remain as classed, and to have the Notification **N. B. 11. 88** recorded in the Register.

The amount of Entry Fee .. £ : : received by me,
 Special .. £ : :
 Donkey Boiler Fee .. £ : :
 Certificate (if required) .. £ : : 18
To be sent as per margin.
 (Travelling Expenses, if any, £)

Committee's Minute **TUES 4 DEC 1888**

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

