

REPORT ON MACHINERY

6784

No. 6784

TUESDAY 30 DEC 1884

Received at London Office

No. in Survey held at Gumbarton Date, first Survey 15th April Last Survey 29th December 1884
 Reg. Book. on the Screw Steamer "Lampo" (Number of Visits 26) Tons 434.07
 Master Strang Built at Gumbarton By whom built Mr. Denny Brothers When built 1884
 Engines made at Gumbarton By whom made Denny & Co. when made 1884
 Boilers made at " By whom made " when made 1884
 Registered Horse Power 92 Owners Union Steam Ship Coy of New Zealand Port belonging to London

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting
 Diameter of Cylinders 26 $\frac{1}{2}$ " + 48" Length of Stroke 30" No. of Rev. per minute 40 Point of Cut off, High Pressure $\frac{1}{4}$ Low Pressure $\frac{1}{4}$
 Diameter of Screw shaft 9" Diam. of Tunnel shaft 8 $\frac{1}{2}$ " Diam. of Crank shaft journals 9 $\frac{1}{2}$ " Diam. of Crank pin 9 $\frac{1}{4}$ " size of Crank webs 6" x 11 $\frac{1}{2}$ "
All the shafting turned & finished by the Engineers
 Diameter of screw 12 $\frac{1}{2}$ " Pitch of screw 15 $\frac{1}{2}$ " No. of blades 4 state whether moveable Yes total surface 38 $\frac{1}{2}$ "
 No. of Feed pumps Two diameter of ditto 3" Stroke 16 $\frac{1}{8}$ " Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 3" Stroke 16 $\frac{1}{8}$ " Can one be overhauled while the other is at work Yes
 Where do they pump from From all Compartments
 No. of Donkey Engines Two Size of Pumps 8" x 4" x 9" 10" x 8" x 10" Where do they pump from Sea Bilge Hotwell also from ballast Tanks
 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 5 $\frac{1}{2}$ " Are they connected to condenser, or to circulating pump To Circulating
 How are the pumps worked By Eccentric on Crank webs
 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 None How are they protected "
 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 in dry dock On ship before launching
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

BOILERS, &c.—

Number of Boilers One Description Round Horizontal Whether Steel or Iron Steel
 Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 12th November 1884
 Description of superheating apparatus or steam chest Round Length
 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 69 $\frac{1}{2}$ " Description of safety valves Direct Spring No. to each boiler Two
 Area of each valve 10.9" 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 or woodwork 13" Diameter of boilers 14" + 4 $\frac{1}{8}$ "
 Length of boilers 9' 11 $\frac{1}{2}$ " description of riveting of shell long. seams Double riveted circum. seams Double riveted Thickness of shell plates 1 $\frac{1}{16}$ " full
 Diameter of rivet holes 1 $\frac{1}{8}$ " whether punched or drilled Drilled pitch of rivets 4 $\frac{1}{2}$ " Lap of plating 12 $\frac{1}{2}$ " Staps
 Percentage of strength of longitudinal joint 45% working pressure of shell by rules 85 lbs size of manholes in shell 17" x 13"
 Size of compensating rings Double plate fitted No. of Furnaces in each boiler Three
 Outside diameter 3' 9" length, top 6' 6" bottom 9' 5" thickness of plates 1 $\frac{1}{16}$ " description of joint Corrupted if rings are fitted "
 Greatest length between rings " working pressure of furnace by the rules 111 lbs combustion chamber plating, thickness, sides 9 $\frac{1}{16}$ " back 9 $\frac{1}{16}$ " top 9 $\frac{1}{16}$ "
 Pitch of stays to ditto, sides 8' x 8 $\frac{3}{4}$ " back 8' x 8 $\frac{3}{4}$ " top 8' x 8" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 106 lbs Diameter of stays at smallest part 1 $\frac{1}{8}$ " working pressure of ditto by rules 112 lbs end plates in steam space, thickness 1 $\frac{1}{16}$ "
 Pitch of stays to ditto 17" x 17" how stays are secured By double nut working pressure by rules 80 lbs diameter of stays at smallest part 2" working pressure by rules 80 lbs Front plates at bottom, thickness 1 $\frac{1}{16}$ " Back plates, thickness 1 $\frac{1}{16}$ "
 Greatest pitch of stays 11" x 8 $\frac{3}{4}$ " working pressure by rules 115 lbs Diameter of tubes 3 $\frac{1}{4}$ " pitch of tubes 4 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " thickness of tube plates, front 1 $\frac{1}{16}$ " back 1 $\frac{1}{16}$ " how stayed By tubes pitch of stays 9' x 13 $\frac{1}{2}$ " width of water spaces 6"
 Diameter of Superheater or Steam chest 3' 2" length 6' 0 $\frac{1}{2}$ " thickness of plates 1 $\frac{1}{16}$ " description of longitudinal joint Double riveted diam. of rivet holes 1 $\frac{1}{8}$ "
 Pitch of rivets 3 $\frac{1}{4}$ " working pressure of shell by rules 181 lbs 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 9 $\frac{1}{16}$ " how stayed Stitch 3 $\frac{1}{2}$ "
 Superheater on steam chest; how connected to boiler By hook pieces 15" dia x 3 $\frac{1}{2}$ " long

State of Report to also sent on the result of the ship

6784-gb

DONKEY BOILER— Description *Flat sided Horizontal*
 Made at *Dumbarton* by whom made *Senny & Co* when made *1884* where fixed *In Stechhold*
 Working pressure *20 lb* tested by hydraulic pressure to *160 lb* No. of Certificate *1528* fire grate area *13 ft* description of safety
 valves *Direct Spring* No. of safety valves *one* area of each *13 ft* if fitted with easing gear *Yes* if steam from main boilers can
 enter the donkey boiler *No* diameter of donkey boiler *4' 8"* length *4' 2 1/2"* description of riveting *Double riveted laps*
 Thickness of shell plates *3/16"* diameter of rivet holes *7/8"* whether punched or drilled *Drilled* pitch of rivets *3/4"* lap of plating *1/2"*
 per centage of strength of joint *73% + 60%* thickness of *end* plates *1/16"* stayed by *Stay bars 1 1/4" steel*
 Diameter of furnace, top *3' 3"* bottom *—* length of furnace *5 ft* thickness of plates *3/16"* description of joint *double butt straps*
 Thickness of *combustion* furnace crown plates *3/16"* stayed by *Screw stays* working pressure of shell by rules *115 lb*
 Working pressure of furnace by rules *115 lbs* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied: *One half length of Crank shaft, Propeller shaft complete, 4*
propeller blades, 2 valve spindles, bushes for Crank pins & valve gear, 2 valve seats for feed & 2 for
circulating pumps, 1 pump rod to fit either Air or Circulating pumps, 2 complete sets of valves for Air
Circulating pumps, 50 Condenser tubes, 36 Boiler tubes, 1 set Coupling bolts, 4 Connecting rods, 1 set
 The foregoing is a correct description, *Top & bottom end. Assortment of bolts, nuts, iron and*
other gear
Senny & Co. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines & Boilers*)
are of good workmanship and materials and are now in good
order and safe working condition and eligible in my opinion
to be noted in the Register Book  *Lloyds, M.C. 17/84*

This is submitted that this
matter is eligible to have the
notification sent to M.C. records
M 30/12/84

The amount of Entry Fee £ 1 : - : - received by me,
 Special *M.C.* £ 13 : 16 : -
 Donkey Boiler Fee £ - : - : -
 Certificate (if required) .. £ - : - : - *24/12/1884*
 (To be sent as per margin.)
 (Travelling Expenses, if any, £ - 8/-)
 Committee's Minute

TUESDAY 30 DEC 1884

James Morrison
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
 Clyde District

