

REPORT ON MACHINERY.

(Received at London Office 20th April 1882)

5648
Survey held at Dumbarton Date, first Survey 25.8.81 Last Survey 19.4.1882
on the Steamer "Mahinopua" Tons 394
Built at Dumbarton When built 1882
By whom made Denny & Co. when made 1882
By whom made " when made 1882
Horse Power 80. Owners Union Coy. of N. Zealand Port belonging to Dunedin

ES, &c.—
Compound Inverted Direct Acting Horizontal
Length of Stroke 24" No. of Rev. per minute 100 Point of Cut off, High Pressure 1/10" Low Pressure 1/10"
Diameter of Crank pin 5 1/4" size of Crank webs 1/2" x 3 1/2"
Pitch of screw 9' 0" No. of blades 4' state whether moveable no total surface 13' 5" Ro. 9' 6"
Can one be overhauled while the other is at work yes
Can one be overhauled while the other is at work yes
Where do they pump from Engine room bilges & Hold.
No. of Donkey Engines one Size of Pumps 8 1/2" 4" 9" 8" Where do they pump from Sea. Tanks Bilges Hold

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 two and sizes 2 1/2" Are they connected to condenser, or to circulating pump. Circulating pumps
Are the pumps worked by levers.
Connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both
Are the discharge pipes above or below the deep water line above
Are the blow off cocks fitted with a spigot and brass covering plate yes
How are they protected "
Are the valves, and pumps in connection with the machinery accessible at all times yes
Are the valves arranged so as to prevent an unintentional connection between the sea and the bilges yes
Are the tube, propeller, screw shaft, and all connections examined in dry dock before launching
Is the tunnel watertight yes and fitted with a sluice door yes worked from Upper deck

, &c.—
Boilers one Description Cylindrical Single ended Multitubular Steel Internals
Working Pressure 40 lbs. Tested by hydraulic pressure to 140 lbs. Date of test 9. 12. 81
Description of superheating apparatus or steam chest None
Can the superheater be shut off and the boiler worked separately "
Description of safety valves direct spring
Area of each valve 15' 9" Are they fitted with easing gear yes
Are they fitted with easing gear "
Distance between boilers and bunkers on woodwork 6"
Boilers 14' 0 1/4" Length of boilers 9' 1" description of riveting of shell long. seams hot lap. circum. seams double lap.
Pitch of rivets 3 1/4" x 2 1/4"
Diameter of rivet holes 1 3/16" whether punched or drilled drilled
Percentage of strength of longitudinal joint 43 working pressure of shell by rules 82
Shell 14' x 13' size of compensating rings 32" x 30 x 1"
Length, top 6' 0" bottom 8' 5"
Description of joint Welded if rings are fitted no greatest length between rings "
Plating, thickness, sides 1/2" back 1/2" top 1/2"
Sides 9' x 7 1/2" back 8 1/2' x 7 1/2" top round
Working pressure of plating by rules 49 lbs.
Working pressure of ditto by rules 90 lbs.
Stays at smallest part 1 1/4" pitch of stays to ditto 14' x 14 1/2" how stays are secured 2. Nuts & Washers
Working pressure by rules 93 lbs. diameter of stays at smallest part 2 1/4" working pressure by rules 97 lbs.
Back plates, thickness 7/8" greatest pitch of stays 8 1/2' x 7 1/2" working pressure by rules 89 lbs.

5678 gls

Diameter of tubes $3\frac{1}{2}"$ pitch of tubes $4\frac{3}{4}"$ thickness of tube plates, front $\frac{1}{16}"$ back $\frac{1}{16}"$
 How stayed *by tubes* pitch of stays $14\frac{1}{4}" \times 14"$ width of water spaces $6"$
 Diameter of Superheater or Steam chest " length "
 Thickness of plates " description of longitudinal joint " diameter 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 "

DONKEY BOILER— Description *Vertical. Inverted Cone & Crossed tubes of steel*
 Made at *Burntaston* By whom made *Denny & Co.* when made *1882*
 Where fixed *at the mill* working pressure *40 lbs* Tested by hydraulic pressure to *140 lbs* No. of Certificate *9*
 Fire grate area *13' 9" ft.* Description of safety valves *direct spring* No. of safety valves *one* area of each *4.02*
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes*
 Diameter of donkey boiler *5' 6 1/4"* length *Height 8' 9"* description of riveting *double single*
 thickness of shell plates *3/8"* diameter of rivet holes *13/16"* whether punched or drilled *drilled*
 pitch of rivets *3 1/4"* lap of plating *4 1/2"* per centage of strength of joint *75*
 thickness of crown plates *1/2"* stayed by *4 rod stays 2 5/8" dia.*
 Diameter of furnace, top *4' 2 1/2"* bottom *4' 8 1/2"* length of furnace "
 thickness of plates *7/16"* description of joint *single riveted lap joint*
 thickness of furnace crown plates *7/16"* stayed by *4 rod stay 2 5/8" dia.*
 Working pressure of shell by rules *94 lbs.* working pressure of furnace by rules *45 lbs.*
 diameter of uptake *16"* thickness of plates *3/8"* thickness of water tubes *3/8"*

The foregoing is a correct description,

Denny & Co. Manufacturer.

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

The Machinery & Boilers of the above named vessel are of good workmanship and are now in safe working condition and are in my opinion eligible to be noted in the Register Book.

" LLOYD'S R.C.,

The amount of Entry Fee .. £ 2 : 0 : 0 received by me,

Special .. £ 12 : 0 : 0

Certificate (if required) .. £ 0 : 0 : 0 19/4/1882

To be sent as per margin.

(Travelling Expenses, if any, £)

Committee's Minute

Friday, April, 21st. 1882.

Thos Brown
 Engineer Surveyor to Lloyd's Register of British & Foreign Sh

Clyde District

Lloyd's Register
 Foundation