

# REPORT ON MACHINERY.

No. 6291

No. in Survey held at  
Reg. Book.

Glasgow

Date, first Survey January 1883

Received at London Office

THURSDAY 25, OCT 1883

Last Survey Oct 17 1883

(Number of Visits 47)

Tons 2965

on the Screw Steamer "Gouarero"

Master C. Owen Hallett Built at Glasgow By whom built John Elder & Co

When built 1883

Engines made at Glasgow By whom made John Elder & Co

when made 1883

Boilers made at " By whom made "

when made 1883

Registered Horse Power 600

Owners New Zealand Shipping Co

Port belonging to Lyttelton

## ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting

Diameter of Cylinders 46" & 88" Length of Stroke 54" No. of Rev. per minute 68 Point of Cut off, High Pressure Swirl Low Pressure "

Diameter of Screw shaft 17" Diam. of Tunnel shaft 16" Diam. of Crank shaft journals 14 1/2" Diam. of Crank pin 17 1/2" size of Crank webs 12 3/4" x 2' 11"

Diameter of screw 18 1/2" Pitch of screw 24' 6" No. of blades Four state whether moveable Yes total surface 108 sq ft

No. of Feed pumps Two diameter of ditto 6 1/2" Stroke 25 1/2" Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two diameter of ditto 6 1/2" Stroke 25 1/2" Can one be overhauled while the other is at work Yes

Where do they pump from All Compartments

No. of Donkey Engines One Size of Pumps 12" cyl 4" x 12" stroke Where do they pump from From sea bilge & stowell

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 10" pipe Are they connected to condenser, or to circulating pump To Circulating

How are the pumps worked By Levers

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 Main Steam pipe How are they protected By iron 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 in dry dock On ship previous to being launched

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

## BOILERS, &c.—

Number of Boilers Three Description Round Horizontal Whether Steel or Iron Steel

Working Pressure 110 lbs Tested by hydraulic pressure to 220 lbs Date of test 9th Aug 1883

Description of superheating apparatus or steam chest None

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 130 1/2 Description of safety valves Direct Spring No. to each boiler Three

Area of each valve 21.64" 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 13' 8"

Length of boilers 17' 3" description of riveting of shell long. seams Double riveted Circum. seams Double riveted Thickness of shell plates 1 5/16"

Diameter of rivet holes 1 1/16" whether punched or drilled Drilled pitch of rivets 6 3/8" x 3 1/2" Lap of plating Shops 15" x 3/4" x 3/8"

Per centage of strength of longitudinal joint 82% working pressure of shell by rules 122 lbs size of manholes in shell 16" x 12"

Size of compensating rings Larged rings fitted No. of Furnaces in each boiler Six

Greatest length between rings " working pressure of furnace by the rules 125 lbs combustion chamber plating, thickness, sides 1 3/32" back 9/16" top 1 3/32"

Pitch of stays to ditto, sides 1 3/4" x 1 1/2" back " top 1 3/4" x 1 1/2" stays are fitted with nuts or riveted heads Nuts working pressure of plating by

rules 112 lbs Diameter of stays at smallest part 2 3/8" working pressure of ditto by rules 132 lbs end plates in steam space, thickness 1 3/16"

Pitch of stays to ditto 14 3/4" x 14 3/4" how stays are secured By double nuts working pressure by rules 112 lbs diameter of stays at

smallest part 2 3/8" working pressure by rules 112 lbs Front plates at bottom, thickness 1 1/16" Back plates, thickness "

Greatest pitch of stays " working pressure by rules " Diameter of tubes 3 1/2" pitch of tubes 4 3/4" thickness of tube

plates, front 1 1/16" back 1 1/16" how stayed By tubes pitch of stays 14 1/4" x 9 1/2" width of water spaces 4"

Diameter of Superheater or Steam chest None 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 "

GLS148-0283

Lloyd's Register  
Foundation



## DONKEY BOILER—

Description

Round Horizontal

Made at Glasgow

by whom made

Anderson &amp; Lyall

when made 1883

where fixed on upper deck

Working pressure 110 lbs

tested by hydraulic pressure to 220

No. of Certificate 1184

fire grate area 22.5

description of safe

valves Direct Spring

No. of safety valves Two

area of each 4"

if fitted with easing gear Yes

if steam from main boilers can

enter the donkey boiler No

diameter of donkey boiler 8" 2"

length 8" 9"

description of riveting

Double riveted Lap

Thickness of shell plates 1 1/16"

diameter of rivet holes 1 3/16"

whether punched or drilled Drilled

pitch of rivets 1 1/2" x 2 1/2"

lap of plating 4"

per centage of strength of joint 48%

thickness of plates 1 3/16"

stayed by Bar Stays 2 3/8" dia 15 1/2" x 10" pitot fitted with riveted washers

Diameter of furnace 2' 6"

bottom

length of furnace 6' 9"

thickness of plates 7/16" + 9/16"

description of joint

Double Strapped

Thickness of furnace plates 1 3/32"

stayed by Bar Stays 1 1/4" dia 4 1/2" x 4 1/4" pitot

working pressure of shell by rules 133 1/2

Working pressure of furnace by rules 110 lbs

diameter of uptake

thickness of plates

thickness of water tubes

## SPARE GEAR. State the articles supplied:—

one pair of braces for Connecting Rod bottom end.  
 one Air pump bucket, Rod. delivery below seat & studs two main bearing bolts  
 four Connecting Rod bolts. one set Coupling bolts two Lead & two Midge valves with stems  
 two Propeller blades (brass) assortment of bolts & nuts. 29 boiler tubes & 88 Condenser  
 One Locomotive shaft & one patent Coupling.

The foregoing is a correct description,

John Elder &amp; Hay

Manufacturer.

Besides the above mentioned articles a considerable  
 quantity of spare Gear has been supplied.

## General Remarks

(State quality of workmanship, opinions as to class, &amp;c.)

These Engines &amp; Boilers are

of good workmanship and materials and are now in good  
 order & are working and eligible in my opinion to be noted  
 in the Register Book. Lloyd's M.C. 10/83

The amount of Entry Fee .. £ 3 : 0 : 0 received by me.

Special .. .. £ 50 : 0 : 0

Donkey Boiler Fee .. .. £ 0 : 0 : 0

Certificate (if required) .. £ 0 : 0 : 0 23/10/83

To be sent as per margin.

(Travelling Expenses, if any, £ .. ..)

Committee's Minute

FRIDAY 26 OCT 1883

James Molleson  
 Engineer Surveyor to Lloyd's Register of British & Foreign Ships

Clyde District

Lloyd's Register  
 Foundation