

REPORT ON MACHINERY.

No. 12100

Port of *Glasgow*

Recd. 27 MAR 1893

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

Date, first Survey *24th Oct 1892* Last Survey *Mar. 24 1893*

(Number of Visits *3*)

on the *Swire Screw Steamer "Gulcan"*

Tons { Gross *288*
Net *5*

Master *✓* Built at *Glasgow* By whom built *Barclay Curle & Co. Ltd* When built *1893*

Engines made at *Glasgow* By whom made *" " " "* when made *1893*

Boilers made at *"* By whom made *" " " "* when made *1893*

Registered Horse Power *155* Owners *Southampton, Isle of Wight & Southport* belonging to *Southampton*

Nom. Horse Power as per Section 28 *146* of England *Royal Mail Steam Packet Co. Ltd*

ENGINES, &c.— Description of Engines *Triple* No. of Cylinders *3 in each set*
Diameter of Cylinders *16" 24" 39"* Length of Stroke *28"* Revolutions per minute *about 110* Diameter of Screw shaft *as per rule 4 1/2"*
Diameter of Tunnel shaft *as fitted 4 1/2"* Diameter of Crank shaft journals *4 3/4"* Diameter of Crank pin *4 3/4"* Size of Crank webs *built 5' x 16"*
Diameter of screw *8 1/2"* Pitch of screw *12" x 9"* No. of blades *3* State whether moveable *fixed* Total surface *23 ft²*
No. of Feed pumps *One* Diameter of ditto *3"* Stroke *12"* Can one be overhauled while the other is at work *yes*
No. of Bilge pumps *One* Diameter of ditto *3"* Stroke *12"* Can one be overhauled while the other is at work *yes*
No. of Donkey Engines *One* Sizes of Pumps *5" x 3 1/2" x 8 1/2"* Carpenters duplex No. and size of suction connected to both Bilge and Donkey pumps
In Engine Room *2 main suction + 1 donkey* In Holds, &c. *1 in each hold 2"*
1 in stokehold + after hold of funnel

No. of bilge injections *2* sizes *3"* Connected to condenser, or to circulating pump *no* Is a separate donkey suction fitted in Engine room & size *yes (2 1/2")*
Are all the bilge suction pipes fitted with roses *yes* Are the roses in Engine room always accessible *yes* Are the sluices on Engine room bulkheads always accessible *yes*
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 and all boiler mountings accessible at all times *yes*
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *yes*
When were stern tube, propeller, screw shaft, and all connections examined in dry dock *Out slip* Is the screw shaft tunnel watertight *yes* Is the space water-tight across *yes*
Is it fitted with a watertight door *yes* worked from *—*

BOILERS, &c.— (Letter for record *0*) Total Heating Surface of Boilers *2747 total in two boilers*
No. and Description of Boilers *Two (Mult. Single end)* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*
Date of test *—* Can each boiler be worked separately *yes* Area of fire grate in each boiler *44 ft²* No. and Description of safety valves to each boiler *Direct Spring (2)* Area of each valve *5.41"* Pressure to which they are adjusted *160 lbs* Are they fitted with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *about 12"* Mean diameter of boilers *13.9"*
Length *10 ft* Material of shell plates *Steel* Thickness *1 1/2"* Description of riveting: circum. seams *Double* long. seams *Double*
Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *7 1/8"* Lap of plates or width of butt strap *Straps 16 3/4" x 16"*
Per centages of strength of longitudinal joint *82%* Working pressure of shell by rules *162 lbs* Size of manhole in shell *16" x 12"*
Size of compensating ring *Double* No. and Description of Furnaces in each boiler *3 ribbed* Material *Steel* Outside diameter *3 ft*
Length of plain part *6 1/2"* Thickness of plates *1 1/2"* Description of longitudinal joint *welded* No. of strengthening rings *—*
Working pressure of furnace by the rules *160 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *9/16"*
Pitch of stays to ditto: Sides *13/16" x 13/16"* Back *13/16" x 13/16"* Stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *189 lbs*
Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *68"* Working pressure by rules *194 lbs* End plates in steam space *16"*
Material *Steel* Thickness *1 1/2"* Pitch of stays *15 x 10"* How are stays secured *by double* Working pressure by rules *149 lbs* Material of stays *Iron*
Diameter at smallest part *2 3/4"* Area supported by each stay *225"* Working pressure by rules *166 lbs* Material of Front plates at bottom *Steel*
Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *12 1/2" x 13 1/4"* Working pressure of plate by rules *—*
Diameter of tubes *8 1/2"* Pitch of tubes *4 1/8" x 4 1/8"* Material of tube plates *Steel* Thickness: Front *13/16"* Back *14/16"* Mean pitch of stays *9 1/4" x 9 1/4"*
Pitch across wide water spaces *6"* Working pressures by rules *—* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *8" x 3 1/4" double* Length as per rule *2' x 8"* Distance apart *4 1/2"* Number and pitch of Stays in each *3 (13/16" x 13/16")*
Working pressure by rules *—* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked separately *—* Diameter *—* Length *—* Thickness of shell plates *—* Material *—* Description of longitudinal joint *—* Diam. of rivet holes *—* Pitch of rivets *—* Working pressure of shell by rules *—* Diameter of flue *—* Material of flue plates *—* Thickness *—*
If stiffened with rings *—* Distance between rings *—* Working pressure by rules *—* End plates: Thickness *—* How stayed *—*
Working pressure of end plates *—* Area of safety valves to superheater *—* Are they fitted with easing gear *—*

GLS167A-0129

DONKEY BOILER—

Description

12100 gls
No Donkey Boiler

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

If fitted with easing gear

If steam from main boilers can

enter the donkey boiler

Diameter of donkey boiler

Length

Material of shell plates

Thickness

Description of riveting long. seams

Diameter of rivet holes

Whether punched or drilled

Pitch of rivets

Lap of plating

Per centage of strength of joint

Rivets
Plates

Thickness of shell crown plates

Radius of do.

No. of Stays to do.

Dia. of stays.

Diameter of furnace Top

Bottom

Length of furnace

Thickness of furnace plates

Description of

joint

Thickness of furnace crown plates

Stayed by

Working pressure of shell by rules

Working pressure of furnace by rules

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

SPARE GEAR.

State the articles supplied:

For towing purposes

The foregoing is a correct description,

Manufacturer.

FOR BARCLAY, CURLE & CO., LTD.

James Gilchrist

General Remarks

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

*These Engines & Boilers**are of good workmanship & Material and are now
in good order & safe working condition and eligible
in my opinion to be noted in the Register of
+ Lloyd's M.C. 3/93**2 Large reports
1 Boiler Drawing**Appended herewith
M*It is submitted that
this vessel is eligible for

THE RECORD + LMC 3.93.-

M.C. 27/3/93-

Certificate (if required) to be sent to

The amount of Entry Fee.

£

2 * 100

When applied for,

Special

..

..

£

26 : 8

23/3/93

Donkey Boiler Fee

£

" : "

When received,

Travelling Expenses (if any)

£

" : "

24/3/93

Committee's Minute

TUES. 28 MAR 1893

Assigned

*+ LMC 3.93*James Morrison
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.*Clyde District*Lloyd's Register
Foundation