

REPORT ON MACHINERY.

No. 12414

MON. 4 SEP 1893

Port of Glasgow

Received at London Office

No. in Survey held at Paisley

Date, first Survey 14th Nov

Last Survey 2nd March 1893.

Reg. Book.

721. on the S.S. Clan Mackenzie

(Number of Visits)

Tons

Gross 2954
Net 1930

Master

Built at Leith

By whom built Ramafe Ferguson

When built

1882.4

Engines made at Glasgow

By whom made David Rowan

when made

1882

Boilers made at Glasgow

By whom made David Rowan

when made

1882

Registered Horse Power 400

Owners

Kayzer, Irvine & Co.

Part belonging to

Glasgow

Nom. Horse Power as per Section 28

ENGINES, &c. — Description of Engines No. of Cylinders

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted

Diameter of Tunnel shaft as per rule as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs

Diameter of screw Pitch of screw No. of blades State whether moveable 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

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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 and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication 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

Is it fitted with a watertight door worked from

BOILERS, &c. — (Letter for record) Total Heating Surface of Boilers

No. and Description of Boilers Working Pressure Tested by hydraulic pressure to

Date of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to each boiler

Area of each valve Pressure to which they are adjusted Are they fitted with casing gear

Smallest distance between boilers or uptakes and bunkers or woodwork Mean diameter of boilers

Length Material of shell plates Thickness Description of riveting: circum. seams long. seams

Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler 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 casing gear

If not, state whether, and when, one will be sent? Is a Report also sent on the Boiler? [L.P.H. Form No. 8 - 4/2/92 - Copyright Ink.]

GLS168-0027

Lloyd's Register Foundation

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DONKEY BOILER— Description *Multitubular*
 Made at *Paisley* By whom made *Bow, McLaughlan & Co* When made *1893* Where fixed *on deck*
 Working pressure *100 lbs* tested by hydraulic pressure to *200 lbs* No. of Certificate *3257* Fire grate area *30 sq* Description of safety valves *d. Spring*
 No. of safety valves *2*. Area of each *5 sq* Pressure to which they are adjusted *85 lbs* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *11'-0"* Length *9'-0"* Material of shell plates *steel* Thickness *1/16"*
 Description of riveting long. seams *d. butt. tub riv* Diameter of rivet holes *7/8"* Whether punched or drilled *drill* Pitch of rivets *4 7/8"*
 Lap of plating *1 3/4"* Per centage of strength of joint *81.1* Rivets *84* Thickness of shell crown plates *23/32"* Radius of do. *—* No. of Stays to do. *13 7/8"*
 Dia. of stays. *1 7/8"* Diameter of furnace Top *38* Bottom *—* Length of furnace *6'-0"* Thickness of furnace plates *17/32"* Description of joint *welded* Thickness of furnace crown plates *1/2"* Stayed by *1 1/4" stays 8 3/4" pitch* Working pressure of shell by rules *110 lbs*
 Working pressure of furnace by rules *118 lbs* Diameter of *water* tubes *3/4"* Thickness of *water* plates *1/16"* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied :—

John Sanderson
2.9.93. —

The foregoing is a correct description,
Manufacturer.

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

It is submitted that
this vessel is eligible
remain AS CLASSED.

Prob
4/9/93 -

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	:	:	<i>2/5</i> 9/18
Donkey Boiler Fee	£	<i>2</i>	<i>2</i>	When received
Travelling Expenses (if any) £	:	:	:	<i>14/6</i> 9/18

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

Committee's Minute

TUES. 5 SEP 1893

Assigned *see minute on repair report.*



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(The Surveyors are requested not to sign the space for Committee's Minute.)