

# REPORT ON MACHINERY.

No.

12948

Port of *Glasgow*

Received at London Office

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No. in Survey held at *Glasgow*

Date, first Survey *27<sup>th</sup> Sept. 1893* Last Survey *28<sup>th</sup> May 1894*

Reg. Book.

(Number of Visits *43*)

on the

*S. S. Teviotdale*

Gross *3824*  
Tons Net *2537*

Master *J. Gordon* Built at *Glasgow* By whom built *Wm. Hamilton & Co* When built *1894*

Engines made at *Glasgow* By whom made *David Rowan & Son* when made *1894*.

Boilers made at *Glasgow* By whom made *David Rowan & Son* when made *1894*.

Registered Horse Power *360*. Owners *R. Mackill & Co.* Port belonging to *Glasgow*

Nom. Horse Power as per Section 28 *294*.

ENGINES, &c.— Description of Engines *Triple Expansion* No. of Cylinders *Three*  
Diameter of Cylinders *24", 40" & 64"* Length of Stroke *45"* Revolutions per minute *70* Diameter of Screw shaft *as per rule 11.63*  
Diameter of Tunnel shaft *as fitted 13"* Diameter of Crank shaft journals *13"* Diameter of Crank pin *13 1/4"* Size of Crank webs *built*  
Diameter of screw *17'-0"* Pitch of screw *20'-0"* No. of blades *4*. State whether moveable *yes* Total surface *87.3 sq. ft*  
No. of Feed pumps *2*. Diameter of ditto *3 3/4"* Stroke *23"* Can one be overhauled while the other is at work *yes*  
No. of Bilge pumps *2*. Diameter of ditto *4"* Stroke *23"* Can one be overhauled while the other is at work *yes*  
No. of Donkey Engines *Two* Sizes of Pumps *Ball Dup. 8" x 9" x 8"* No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room *four 3 1/2"* In Holds, &c. *four 3 1/2" for four 3 1/2" aft*

No. of bilge injections *1*. sizes *5"* Connected to condenser or to circulating pump *yes* Is a separate donkey suction fitted in Engine room & size *yes 3 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 *see*  
What pipes are carried through the bunkers *none* How are they protected *br. Rep.*  
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 *see br. Rep.* Is the screw shaft tunnel watertight *yes*  
Is it fitted with a watertight door *yes* worked from *upper platform*

BOILERS, &c.— (Letter for record *(5)*) Total Heating Surface of Boilers *4719*.  
No. and Description of Boilers *Two S.E. Multitubular* Working Pressure *160 lbs* Tested by hydraulic pressure to *320 lbs*  
Date of test *29.1.94* Can each boiler be worked separately *yes* Area of fire grate in each boiler *78 sq. ft* No. and Description of safety valves to  
each boiler *2. Spring loaded* Area of each valve *11.04"* Pressure to which they are adjusted *164 lbs* Are they fitted  
with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Mean diameter of boilers *15'-9"*  
Length *11'-0"* Material of shell plates *steel* Thickness *1 9/32"* Description of riveting: circum. seams *lap* long. seams *d. butt str.*  
Diameter of rivet holes in long. seams *1 5/16"* Pitch of rivets *8 1/2" & 4 1/4"* Lap of plates or width of butt straps *5 7/8" & 18 1/2"*  
Per centages of strength of longitudinal joint *91* Working pressure of shell by rules *165 lbs* Size of manhole in shell *12" x 16"*  
Size of compensating ring *28" x 1 9/32"* No. and Description of Furnaces in each boiler *Four Furnaces* Material *Steel* Outside diameter *40"*  
Length of plain part *top 37'-6" bottom 37'-6"* Thickness of plates *top 1 5/32" bottom 1 5/32"* 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 *1 9/32"* Back *1 9/32"* Top *7/8"* Bottom *7/8"*  
Pitch of stays to ditto: Sides *8"* Back *7 3/4" x 8 1/4"* Top *8"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *160 lbs*  
Material of stays *Steel* Diameter at smallest part *1 3/4" x 1 1/2"* Area supported by each stay *164 lb* Working pressure by rules *162 lbs* End plates in steam space:  
Material *Steel* Thickness *7/8" & 1 1/8"* Pitch of stays *16 1/2" x 16 1/2"* Are stays secured *d. nuts* Working pressure by rules *163 lbs* Material of stays *Steel*  
Diameter at smallest part *3"* Area supported by each stay *264 lb* Working pressure by rules *190 lbs* Material of Front plates at bottom *Steel*  
Thickness *1 5/16"* Material of Lower back plate *Steel* Thickness *7/8"* Greatest pitch of stays *dbl. plate* Working pressure of plate by rules *160 lbs*  
Diameter of tubes *3 1/2"* Pitch of tubes *4 7/8" & 4 3/4"* Material of tube plates *Steel* Thickness: Front *3/4"* Back *3/4"* Mean pitch of stays *9 3/8"*  
Pitch across wide water spaces *14 1/2"* Working pressures by rules *160 lbs by dbl. Girders to Chamber tops: Material iron* Depth and  
thickness of girder at centre *10" x 7/8"* Length as per rule *2'-9"* Distance apart *8"* Number and pitch of Stays in each *3. 8"*  
Working pressure by rules *165 lbs* 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 easing gear *—*

CRW327-0003



## DONKEY BOILER—

Description

Multitubular.

Made at

Glasgow

By whom made

J. Rowan &amp; Son

When made

1894

Where fixed

Deck.

Working pressure 100 lbs tested by hydraulic pressure to 200 lbs. No. of Certificate 3485. Fire grate area 23<sup>5</sup> Description of safety valves d. opening

No. of safety valves 2. Area of each 4" Pressure to which they are adjusted 100 lbs If fitted with easing gear Yes If steam from main boilers can

enter the donkey boiler No Diameter of donkey boiler 8'-6" Length 8'-6" Material of shell plates Steel Thickness 5/8"

Description of riveting long. seams treb. riv. lap Diameter of rivet holes 15/16 Whether punched or drilled drilled Pitch of rivets 3 3/16

Lap of plating 6 3/8 Per centage of strength of joint Rivets 77. Thickness of shell plates 15/32 Radius of do. — Series of Stays to do. 1 1/4"

Dia. of stays. — Diameter of furnace Top 29" Bottom — Length of furnace 5'-9" Thickness of furnace plates 1/2" Description of

joint welded Thickness of furnace plates 5/8 Stays by 2 1/8 Steel Stays Working pressure of shell by rules 106 lbs

Working pressure of furnace by rules 126 lbs Diameter of uptake tubes 3 1/4" Thickness of uptake plates 11/16 Thickness of water tubes —

## SPARE GEAR.

State the articles supplied:—

Four prop. blades, bottom end brasses.  
top and bottom end bolts, main bearing & coupling  
bolts. Feed and bilge pump valves &c. —

The foregoing is a correct description,

David Rowan &amp; Son

Manufacturer.

## General Remarks

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

The above mentioned

engines and boilers have been built under  
Special Survey and are of good workmanship  
and material. They have been well fitted  
on board and tried under steam with  
satisfactory results.

The vessel is now in my opinion eligible to the  
notation of: - *L.M.C. 5. 94* in the  
Society's Register—

Attached copy of app. print of Boilers & Launch. Rep.  
Shafting turned & built by engine makers

It is submitted that  
the vessel is eligible for  
THE RECORD + L.M.C. 5, 94

J. R. S.  
4-6-94

MACHINERY CERTIFICATE  
WRITTEN.

Certificate (if required) to be sent to

The amount of Entry Fee.. £ 2 : " : "

Special .. £ 34 : 14 : "

Donkey Boiler Fee .. £ " : " : "

Travelling Expenses (if any) £ " : " : "

When applied for,

29/5/94

When received,

30/5/94

Committee's Minute

TUES. 5 JUN 1894

Assigned

+ L.M.C. 5, 94

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



Glasgow  
Lloyd's Register  
Foundation