

## REPORT ON MACHINERY.

Port of *Greenock*

Received at London Office

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No. in  
Reg. Book.

Survey held at

*Greenock & Port Glasgow*

Date, first Survey

*17<sup>th</sup> January 1891*

Last Survey

*26<sup>th</sup> February 1892*

(Number of Visits)

*106*46 on the *Auxiliary Steam Barge, "Maria Rickmers,"*Tons { Gross *3822.18*Net *3343.96*When built *1891.2*Master *J. Lennierich* Built at *Port Glasgow* By whom built *Russell & Co.*Engines made at *Greenock* By whom made *Kincaid & Co. (Lim<sup>d</sup>)* when made *1891.2*Boilers made at *Glasgow* By whom made *H. Wallace & Co.* when made *1891.*Registered Horse Power *160* Owners *Rickmers Reismihlen Rhederi* Port belonging to *Bremenhausen.*Nom. Horse Power as per Section 28 *113.*

ENGINES, &c.— Description of Engines *Inverted Direct Acting, Triple Expansion,* No. of Cylinders *Three.*

Diameter of Cylinders *16.26 & 4.2.* Length of Stroke *27"* Revolutions per minute *108* Diameter of Screw shaft *as per rule 7.47*

Diameter of Tunnel shaft *as fitted 7.17* Diameter of Crank shaft journals *8"* Diameter of Crank pin *8"* Size of Crank webs *10 x 6.*

Diameter of screw *10.0* Pitch of screw *from 8 feet up* No. of blades *Two* State whether moveable *yes* Total surface *21.3 square feet*

No. of Feed pumps *Two* Diameter of ditto *2 1/2"* Stroke *18"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *Two* Diameter of ditto *3 1/2"* Stroke *18"* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *Two* Sizes of Pumps *10 x 9 & Duplex 3 x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *Three 2 1/2"* In Holds, &c. *One 3". And one 2 1/2" in tunnel wall.*

No. of bilge injections *One* sizes *3 1/2"* Connected to condenser, or to circulating pump *Is a separate donkey suction fitted in Engine room & size* *yes*

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 *none*

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 *yes*

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 *before launching* Is the screw shaft tunnel watertight *yes*

Is it fitted with a watertight door *yes* worked from *Top platform.*

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

No. and Description of Boilers *See Glasgow Report, attached hereto* 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 easing 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 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 Thickness of plates crown Description of longitudinal joint No. of strengthening rings

bottom 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 easing gear



DONKEY BOILER— Description *See Glasgow Report attached hereto.*

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 \_\_\_\_\_ 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:— 2 pump and links and 2 rods. 2 Eccentric straps  
2 bolts for straps. 1 horse shoe thrust block 3 piston packing rings (one for each side.)  
2 springs for feed pump relief valves. 1 set ballast pump valves. 1 do for feed Donkey pump  
1 slide valve spindle. 2 top & 2 bottom end bolts & nuts. 2 main bearing bolts. 1 set coupling  
The foregoing is a correct description,

Pro KINCAID & CO LIMITED Manufacturer.

*John G. Amcock*

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines have been specially surveyed

during construction. Workmanship good. Main steam pipe satisfactorily tested by hydraulic pressure to 300 lb  
square inch. The machinery and boilers have been satisfactorily fitted on board & tested under full steam.  
Boiler water gauge glasses were found unsatisfactory during the steam test trial. They  
did not indicate the correct height of water in the boiler, which was as stated by the test  
and the vessel has sailed from this port for Cardiff to load for Singapore prior to the Engineer's  
water gauges on boiler satisfactory. The Surveyors at Cardiff have been advised of the circumstances  
in this case. And when the gauges are found to show the correct height of water in the boiler the  
reports upon by the Society's Surveyors at Cardiff. The vessel will in my opinion be eligible to be entered in Register Book.

Spare gear Continued.

1 pair crosshead bushes. 1 slide for link motion. 1 set of feed & bulge pump valves.  
1 set of Air & Circulating pump valves. 1 air pump rod. 1 circulating pump rod. 1  
Crank shaft 2 propeller blades. 1 feed check valve for Main & Donkey boilers. 11 lb  
& 100 packing glands. 12 tubes for Main Boiler. Fire bars for Main & Donkey boilers. A  
quantity of bolts nuts & iron assorted.

Certificate (if required) to be sent to *Greenock Office*

The amount of Entry Fee.. £ 2 : : When applied for,  
Special .. .. £ 16 : 19 : :  
Donkey Boiler Fee .. .. £ 1 : 10 : :  
Travelling Expenses (if any) £ 7 : 6 : :  
When received, 1892

Committee's Minute

TUES. 8 MAR 1892

FRI 11 MAR 1892

Assigned

+ Lmb 2/92

*subject to later report*



Lloyd's Register  
Foundation