

## REPORT ON MACHINERY.

No. 14327.

Port of

GREENOCK

JULY 27 JUN 1905

No. in Survey held at Greenock Date, first Survey 2<sup>nd</sup> Nov 1904 Last Survey 7<sup>th</sup> June 1905  
 Reg. Book. "Caxton" (Number of Visits 93)  
 on the Paddle Steamer "Caxton" Tons <sup>Gross</sup> 1905 <sub>Net</sub>  
 Master Goker Built at Goker By whom built Kapier & Miller Ltd When built 1905  
 Engines made at Greenock By whom made Scott's & Co. & Eng. Co. Ltd when made 1905  
 Boilers made at Greenock By whom made Scott's & Co. & Eng. Co. Ltd when made 1905  
 Registered Horse Power 53 Owners The London County Council Port belonging to London  
 Nom. Horse Power as per Section 28 53 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

### ENGINES, &c.—Description of Engines Compound Surface Condensing No. of Cylinders Two No. of Cranks Two

Dia. of Cylinders 16" 31" Length of Stroke 36" Revs. per minute 55 Dia. of propeller shaft 6 3/8" Material of Steel  
 as fitted 6 5/8" as fitted 6 5/8" as fitted 6 5/8"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube ✓ Is the after end of the liner made water tight

in the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓ If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush ✓

Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as fitted 6 3/8" Dia. of Crank pin 6 3/4" Size of Crank webs 4 1/2" x 4 1/2" Dia. of thrust shaft under

collars ✓ Dia. of propeller 8 6" Pitch of screw ✓ No. of blades 4 State whether moveable Yes Total surface 10 sq. ft. per float

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 8" Can one be overhauled while the other is at work Yes

No. of Bilge pumps ✓ Diameter of ditto ✓ Stroke ✓ Can one be overhauled while the other is at work ✓

No. of Donkey Engines one Sizes of Pumps 3 1/2" x 8" Stroke No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room only one suction from donkey pump In Holds, &c. Forward: one 2" dia.

Aft: one 2" dia.

No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump C. P. Is a separate donkey suction fitted in Engine room & size Yes: 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 ✓

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 Below

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 Nov 1904 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 730 sq. ft. Is forced draft fitted Yes

No. and Description of Boilers One: cylinder multi-ported Working Pressure 109 lbs. Tested by hydraulic pressure to 218 lbs.

Date of test 8/4/05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 25 sq. ft. No. and Description of safety valves to

each boiler 2: direct spring Area of each valve 4.06" Pressure to which they are adjusted 110 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 9" Mean dia. of boilers 9'0" Length 9'3" Material of shell plates Steel

Thickness 9/16" Range of tensile strength 28-32 tons Are they welded or flanged No Descrip. of riveting: cir. seams Lap double long. seams Double butt

Diameter of rivet holes in long. seams 3/4" Pitch of rivets 4 1/8" 2 1/2" Lap of plates or width of butt straps 3 7/8"

Per centages of strength of longitudinal joint 86 Working pressure of shell by rules 115 lbs. Size of manhole in shell 16" x 11"

Size of compensating ring Flanged Ring No. and Description of Furnaces in each boiler 2: plain Material Steel Outside diameter 34.6

Length of plain part top 6'4" Thickness of plates crown 9/16" Description of longitudinal joint Weld No. of strengthening rings none

Working pressure of furnace by the rules 118 lbs. Combustion chamber plates: Material Steel Thickness: Sides 5/32" Back 5/32" Top 5/32" Bottom 5/8"

Pitch of stays to ditto: Sides 8 5/8" x 6 3/4" Back 8 5/8" x 7 1/8" Top 8 5/8" x 7 1/4" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 109 lbs.

Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 6 1/2" Working pressure by rules 125 lbs. End plates in steam space:

Material Steel Thickness 2 1/32" Pitch of stays 1 1/4" x 1 1/8" How are stays secured Double nuts & riveted washers Working pressure by rules 116 lbs. Material of stays Steel

Diameter at smallest part 1 1/8" Area supported by each stay 210 sq. in. Working pressure by rules 131 lbs. Material of Front plates at bottom Steel

Thickness 2 1/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 8 5/8" Working pressure of plate by rules 183 lbs.

Diameter of tubes 2 1/2" Pitch of tubes 3 1/2" x 3 1/2" Material of tube plates Steel Thickness: Front 2 1/32" Back 2 1/32" Mean pitch of stays 1 1/2"

Pitch across wide water spaces 12 1/2" Working pressures by rules 109 lbs. Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 5 1/2" x 1 1/2" Length as per rule 26" Distance apart 8 1/4" Number and pitch of Stays in each 2: 7 1/2"

Working pressure by rules 111 lbs. 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 ✓



DONKEY BOILER— No. Description

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

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Descrip. of riveting long. seams Dia. 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 :—

SCOTT'S SHIPBUILDING & ENGINEERING COMPANY, LIMITED.  
The foregoing is a correct description,

Manufacturer.

Dates During progress of work in shops— 1904. Nov 2. 8. Dec 7. 9. 12. 14. 16. 19. 23. 26. 28. 30. 1905. Jan 10. 11. 12. 16. 17. 18. 19. 20. 23. 24. 25. 26. 28. 30. 31

of Survey During erection on board vessel— Feb 1. 2. 3. 6. 7. 8. 9. 11. 13. 14. 15. 16. 17. 20. 22. 23. 24. 25. 27. 28 Mar 1. 2. 3. 7. 8. 9. 11. 13. 15. 16. 17. 18. 25. 28. 29. 30

while building April 1. 3. 4. 5. 6. 8. 11. 12. 17. 18. 20. 22. 24. 26. 28 May 1. 5. 8. 10. 15. 16. 19. 22. 23. 26. 30 June 1. 5. 6. 7.

Total No. of visits 93.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

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

The Engines and Boiler of this vessel have been built under special survey and the materials and workmanship are good. When completed they were examined under steam and found to work satisfactorily.

The machinery throughout is now in good and efficient condition and eligible in my opinion to have the record **LMC 6.05** marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD **LMC 6.05** F.D. ELEC. LIGHT.

Emd.  
27. 6. 05.  
J.M.

The amount of Entry Fee. £ 1 : : : When applied for, 9/6/1905

Special .. .. £ 8 : : : When received, 11. 7. 05

Donkey Boiler Fee .. .. £ : : :

Travelling Expenses (if any) £ : : :

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

Committee's Minute

Glasgow 26 JUN 1905

Assigned

+ L.M.C. 6.05.

MACHINERY CERTIFICATE  
WRITTEN 27. 6. 05

When fee is paid



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Foundation