

## REPORT ON MACHINERY.

No. 14332.

Port of

GREENOCK

JULS. 27 JUN 1905

Received at London Office

No. in Survey held at GreenockDate, first Survey 2<sup>nd</sup> Nov. 1904 Last Survey 12<sup>th</sup> June 1905

Reg. Book.

(Number of Visits 103)on the Padraic Steamer Whittington

Gross

Net

Master \_\_\_\_\_ Built at Göteborg By whom built Kapier & Müller Lim<sup>d</sup> When built 1905Engines made at Greenock By whom made Scott's S.B. & Eng<sup>rs</sup> 6<sup>th</sup> Lim<sup>d</sup> when made 1905Boilers made at Greenock By whom made Scott's S.B. & Eng<sup>rs</sup> 6<sup>th</sup> Lim<sup>d</sup> when made 1905Registered Horse Power \_\_\_\_\_ Owners The London County Council Port belonging to LondonNom. 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 <sup>as per rule</sup> ~~Screw~~ <sup>approved 6<sup>3</sup>/<sub>8</sub>"</sup> shaft 6<sup>3</sup>/<sub>8</sub>" Material of Steel screw shaft as fitted 6<sup>3</sup>/<sub>8</sub>"

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 <sup>as per rule</sup> as fitted 8<sup>3</sup>/<sub>8</sub>" Dia. of Crank shaft journals <sup>as per rule</sup> as fitted 6<sup>3</sup>/<sub>8</sub>" Dia. of Crank pin 6<sup>3</sup>/<sub>8</sub>" Size of Crank webs 4<sup>1</sup>/<sub>2</sub> x 7<sup>1</sup>/<sub>4</sub>" Dia. of thrust shaft under collars ✓ Dia. of screw 8<sup>3</sup>/<sub>8</sub>" 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<sup>3</sup>/<sub>4</sub>" 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<sup>1</sup>/<sub>2</sub>" 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.

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 Geo. 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 See Vessel 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 420 sq. ft. Is forced draft fitted Yes

No. and Description of Boilers One: Cylinder hull: Single Ended Working Pressure 109 lbs Tested by hydraulic pressure to 218 lbs

Date of test 17/4/04 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 Butt Snap

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

Per centages of strength of longitudinal joint <sup>ribs</sup> 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 <sup>top</sup> 36.4" Thickness of plates <sup>crown</sup> 9/16" Description of longitudinal joint held 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 1/4" 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 61 1/2" Working pressure by rules 125 lbs End plates in steam space:

Material Steel Thickness 3/32" Pitch of stays 14" x 12 3/8" How are stays secured By nuts & washers Working pressure by rules 116 lbs Material of stays Steel

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

Thickness 3/32" Material of Lower back plate Steel Thickness 3/32" 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 3/32" Back 3/32" Mean pitch of stays 12 1/2"

Pitch across wide water spaces 12 1/2" Working pressures by rules 152 lbs 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 1/4"

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 boiler

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of

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

Descrip.

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:—

The foregoing is a correct description,

Manufacturer.

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. 22. 23. 24. 25. 27. 28. Mar 1. 2. 3. 7. 8. 9. 11. 13. 15. 16. 17. 21. 25. 27. 28. 29. 30. April 1. 3. 4. 5. 6. 8. 11. 12. 13. 14. 15. 17. 18. 20. 22. 24. 26. 28. May 1. 5. 8. 10. 15. 16. 17. 22. 23. June 1. 5. 6. 7. 8. 9. 11. 12.

Dates of Survey while building

During progress of work in shops—

During erection on board vessel—

Total No. of visits

103.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

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

The engines and Boiler of this vessel have been under special survey and the materials and workmanship are good. When completed they were examined while running full power trials in the Firth and found to work satisfactorily. The machinery throughout is now in good and efficient condition and eligible in my opinion to have the record of **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.

JMA

Emb.  
27.6.05.

Greenock

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. . . £ 1 : : : When applied for,  
Special . . . . . £ 8 : : : 8/6 1905  
Donkey Boiler Fee . . . £ : : : When received,  
Travelling Expenses (if any) £ : : : 15/6 1905

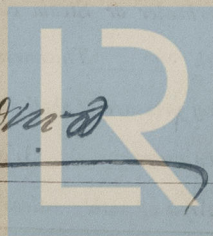
Committee's Minute

Glasgow 26 JUN 1905

Assigned

+ LMC 6.05.

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



© 2021

Lloyd's Register  
Foundation

MACHINERY CERTIFICATE  
WRITTEN 27.6.05