

REPORT ON MACHINERY.

SAT. JUL 1894

Port of Glasgow

Received at London Office

No. in Survey held at Glasgow

Date, first Survey 13th April

Last Survey 2nd July 1894

Reg. Book.

(Number of Visits 18)

on the P. P. Scotsman

Tons } Gross 181
Net 40

Master J. Mc Vicar

Built at Greenock

By whom built Gilman & Co

When built 1894

Engines made at Glasgow

By whom made Mun & Houston

when made 1894

Boilers made at Glasgow

By whom made Mun & Houston

when made 1894

Registered Horse Power 35

Owners J. Kennedy & Sons

Port belonging to Glasgow

Nom. Horse Power as per Section 28 —

ENGINES, &c.—

Description of Engines Compound surface condensing

No. of Cylinders Two

Diameter of Cylinders 14" x 28"

Length of Stroke 20" Revolutions per minute 130

Diameter of Screw shaft as per rule 5.4

Diameter of Tunnel shaft as per rule

none

Diameter of Crank shaft journals 5 3/4"

Diameter of Crank pin 5 3/4"

Size of Crank webs 11" x 3 3/4"

Pitch of screw 7-3"

Pitch of screw 9-6"

No. of blades four State whether moveable no

Total surface 1709 sq ft

Diameter of ditto 2 1/4"

Stroke 10"

Can one be overhauled while the other is at work ✓

Diameter of ditto 2 3/4"

Stroke 10"

Can one be overhauled while the other is at work ✓

Sizes of Pumps one

Sizes of Pumps 2 1/2" "Purins"

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

In Engine Room two 2"

In Holds, &c. two 2"

No. of bilge injection one sizes 2" Connected to condenser, or to circulating pump no 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 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 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 launch the screw shaft tunnel watertight none

Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—

(Letter for record S)

Total Heating Surface of Boilers 6300 sq ft

No. and Description of Boilers one cylindrical return tube Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs

Date of test 22/6/94 Can each boiler be worked separately ✓ Area of fire grate in each boiler 29 sq ft No. and Description of safety valves to each boiler one pair direct spring

Area of each valve 5.93 sq" Pressure to which they are adjusted 120 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean diameter of boilers 9-6"

Length 9-0" Material of shell plates steel Thickness 1/16" Description of riveting: circum. seams lap single long. seams butt tubular

Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 5" Lap of plates — width of butt straps 16 1/2"

Per centages of strength of longitudinal joint 115.6 Working pressure of shell by rules 124 Size of manhole in shell 16 x 12"

Size of compensating ring 8 1/2" rule No. and Description of Furnaces in each boiler two plain Material steel Outside diameter 36"

Length of plain part top 5-6 Thickness of plates 19/32 Description of longitudinal joint riveted No. of strengthening rings none

Working pressure of furnace by the rules 146 Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 5/8"

Pitch of stays to ditto: Sides 8 x 8 Back 8 x 8 Top 8 x 6 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 120

Material of stays steel Diameter at smallest part 9/16" Area supported by each stay 64 sq" Working pressure by rules 120 lbs End plates in steam space:

Material steel Thickness 1/16" Pitch of stays 13 1/2" How are stays secured double nuts Working pressure by rules 123 lbs Material of stays steel

Diameter at smallest part 2-7/16" Area supported by each stay 187 3/4 sq" Working pressure by rules 124 Material of Front plates at bottom steel

Thickness 9/16" Material of Lower back plate steel Thickness 7/16" Greatest pitch of stays 13 1/2" x 11 1/2" Working pressure of plate by rules 146 + 135

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 5/8" Material of tube plates steel Thickness: Front 9/16" Back 9/16" Mean pitch of stays 9 1/8"

Pitch across wide water spaces 13 1/2" x 11 1/2" Working pressures by rules 146 + 135 Girders to Chamber tops: Material iron Depth and thickness of girder at centre 6" x 3 1/4" Length as per rule 26" Distance apart 6 3/4" Number and pitch of Stays in each two 8"

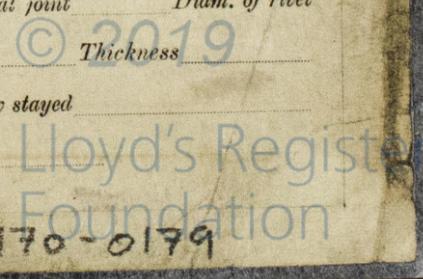
Working pressure by rules 134 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately —

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

If not, state whether... Is a report also sent on the hull of the ship?



GLS170-0179

DONKEY BOILER— Description *none* 13092 lbs
 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 _____
 enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____
 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:— *As required by the rules.*

The foregoing is a correct description,
Wm Houston Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *Engine & Boiler*)
particulars of which are given on the other side have been constructed under special survey the materials & workmanship are of good description they have been well fitted on board steam has been raised on the boiler & the safety valves adjusted on steam & the engine tried.
In my opinion the machinery of this vessel is eligible to have notification LMC 7. 94

It is submitted that
 this vessel is eligible for
 THE RECORD LMC 7, 94
 21-7-94

[Large blue ink signature]

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

Certificate (if required) to be sent to *Glasgow*
 The amount of Entry Fee. . . £ 1 : " : : When applied for,
 Special £ 8 : " : : 19/4 94
 Donkey Boiler Fee £ : : : :
 Travelling Expenses (if any) £ : : 6 9 24 7 18 94

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

Committee's Minute **TUES. 24 JUL 1894**
 Assigned *L.M.C. 7. 94*

