

No. 14254

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office **FRI MAR 6 1896**

No. in Survey held at Paisley Date, first Survey 10th Novem^r 1895 Last Survey 15th Jan^y 1896

Reg. Book. 770 on the S.S. Clan Macintosh Tons { Gross 3994 Net 2619

Master J. Rule Built at Glasgow By whom built Scott & Co When built 1883-6

Engines made at Barron By whom made Naval Construction & Arm^t. Co when made 1892

Boilers made at Barron By whom made Naval Con^{str} & Arm^t. Co when made 1892

Registered Horse Power 528 Owners Cayzer Irvine & Co Port belonging to Glasgow

Nom. Horse Power as per Section 28

ENGINES, &c. — Description of Engines No. of Cylinders

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted

Diameter of Tunnel shaft as per rule as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs

Diameter of screw Pitch of screw No. of blades State whether moveable Total surface

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

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

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

In Engine Room In Holds, &c.

No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight

Is it fitted with a watertight door worked from Donkey

BOILERS, &c. — (Letter for record 5) Total Heating Surface of Boilers

No. and Description of Boilers Working Pressure Tested by hydraulic pressure to 200 lb

Date of test 16/1/96 Can each boiler be worked separately W Area of fire grate in each boiler 354 No. and Description of safety valves to each boiler See direct spring Area of each valve 7.070 Pressure to which they are adjusted 100 lb Are they fitted with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 13" Mean diameter of boilers 11-9"

Length 9-7 1/2 Material of shell plates Steel Thickness 2 1/32 Description of riveting: circum. seams Lap & rivet long. seams Butt & rivet

Diameter of rivet holes in long. seams 25/32 Pitch of rivets 5 9/16 Lap of plates or width of butt straps 12 1/2

Per centages of strength of longitudinal joint rivets 96 plate 96 Working pressure of shell by rules 105 Size of manhole in shell 16 x 12

Size of compensating ring 5 3/4 x 7 1/8 No. and Description of Furnaces in each boiler two Plain Material Steel Outside diameter 39 1/16

Length of plain part top 5-8 bottom 8-3 Thickness of plates crown 3 1/32 bottom 2 1/32 Description of longitudinal joint welded No. of strengthening rings Two bottom

Working pressure of furnace by the rules 112 Combustion chamber plates: Material Steel Thickness: Sides 7/32 Back 1/2 Top 7/32 Bottom 7/32

Pitch of stays to ditto: Sides 9 x 8 3/4 Back 7 1/2 x 8 1/4 Top 9 x 8 1/2 If stays are fitted with nuts or riveted heads but inside Working pressure by rules 100

Material of stays Steel Diameter at smallest part 1 1/8 Area supported by each stay 78 1/2 Working pressure by rules 100 End plates in steam space: Material Steel Thickness 3/4 Pitch of stays 14 x 13 1/4 How are stays secured double nuts Working pressure by rules 129 Material of stays Steel

Diameter at smallest part 1 1/16 Area supported by each stay 192 0 Working pressure by rules 105 Material of Front plates at bottom Steel

Thickness 5/8 Material of Lower back plate 5/8 Steel Thickness 5/8 Greatest pitch of stays 13 Working pressure of plate by rules 153

Diameter of tubes 3 1/2 Pitch of tubes 4 1/2 x 4 1/8 Material of tube plates Steel Thickness: Front 2 1/32 Back 2 1/32 Mean pitch of stays 9 1/2 x 9 5/8

Pitch across wide water spaces 14 Working pressures by rules 140 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/4 x 20 1/4 Length as per rule 29 Distance apart 8 1/2 x 9 Number and pitch of Stays in each two 9

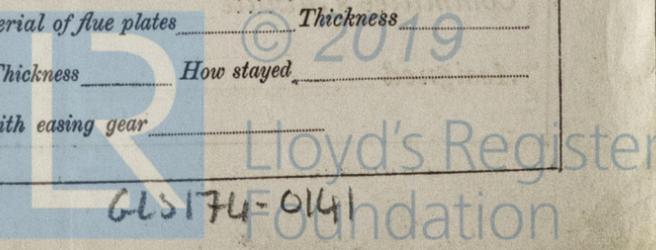
Working pressure by rules 102 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately

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

Is a Report also sent on the Hull of the Ship? If not, state whether.



[142—L.R.P.H.—2,000—Form No. 8.—6/9/94.—Copyable a.u.s.]

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DONKEY BOILER— Description *See other side.*

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 :—

The foregoing is a correct description,

 Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *This donkey boiler has been built under the usual conditions of survey. The material and workmanship being of good quality, and has now been fitted on board in a satisfactory manner, the safety valves being adjusted to one hundred pounds per square inch. For recommendations as to class, see separate report.*)

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special	£	:	:	14/2/96
Donkey Boiler Fee	£	2	2	When received,
Travelling Expenses (if any) £	:	:	:	25/2/96

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

Committee's Minute

FRI. JUN 19 1896

Assigned

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



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