

Port of Glasgow
 Date, first Survey 9th July Last Survey 6th Dec 1907
 Received at London Office TUES. 18 OCT 1904
 No. in Survey held at Glasgow
 Reg. Book. on the Steel Screw Lug "Foam"
 Master A. Dick Built at Paisley By whom built Messrs James Fullerton & Co Tons Gross 91.9
 Engines made at Glasgow By whom made Messrs Ross & Duncan (No 150 3/5) when made 1904
 Boilers made at do By whom made do (No 1005) when made 1904
 Registered Horse Power 41.4 Owners Messrs R. & W. Paul & Co. Port belonging to Ipswich
 Nom. Horse Power as per Section 28 41.4 Is Refrigerating Machinery fitted No Is Electric Light fitted No.

ENGINES, &c.—Description of Engines Compound No. of Cylinders Two No. of Cranks Two
 Dia. of Cylinders 14.28 Length of Stroke 20" Revs. per minute 119 Dia. of Screw shaft 5.95 Material of screw shaft Iron
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 in the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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 2" 0"
 Dia. of Tunnel shaft 5.56 Dia. of Crank shaft journals 5.83 Dia. of Crank pin 5.7 Size of Crank webs 3 7/8 x 9 3/16 Dia. of thrust shaft under
 collars 5 7/8 Dia. of screw 6.6 Pitch of screw 11.6 No. of blades 4 State whether moveable No. Total surface 19"
 No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 10" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1 Diameter of ditto 2 1/2 Stroke 10" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 1 Sizes of Pumps Imp. 4 1/2 x 2 3/4 x 4 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" In Holds, &c. Peak 2" Fore hold 2" Aft hold 2"
 No. of bilge injections 1 sizes 2 1/4" Connected to condenser, or to circulating pump Cir. 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 None
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Valves & Cocks
 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 New Wood Is the screw shaft tunnel watertight No tunnel
 Is it fitted with a watertight door ✓ worked from ✓

OILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 826 Is forced draft fitted No.
 No. and Description of Boilers One S. E. multi tubular Working Pressure 120 lbs Tested by hydraulic pressure to 240 lbs
 Date of test 24.9.04 Can each boiler be worked separately ✓ Area of fire grate in each boiler 29.15 No. and Description of safety valves to
 each boiler Two Direct Spring Area of each valve 2 3/8 dia Pressure to which they are adjusted 125 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 16" Mean dia. of boilers 10" 4 1/16" Length 9' 0" Material of shell plates Steel
 Thickness 2 1/32 Range of tensile strength 28-32 Are they welded or flanged No. Descrip. of riveting: cir. seams S. R. L. long. seams D. Shaps. J. Riv.
 Diameter of rivet holes in long. seams 13/16 Pitch of rivets 5 1/4" Lap of plates or width of butt straps 1" 1 1/2" x 2 1/32" inside
 Percentages of strength of longitudinal joint 89.8 Working pressure of shell by rules 129 lbs Size of manhole in shell 12 x 16
 Size of compensating ring 6 3/4" x 2 1/32" No. and Description of Furnaces in each boiler Two: plain Material Steel Outside diameter 40"
 Length of plain part 6.6 Thickness of plates 9/16 Description of longitudinal joint Welded No. of strengthening rings Angle
 Working pressure of furnace by the rules 127 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 15/32 Top 1/2 Bottom 1/2
 Pitch of stays to ditto: Sides 8 x 8 Back 7 1/2 x 7 1/2 Top 8 x 7 3/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 120 lbs
 Material of stays Steel Diameter at smallest part 1.01 Area supported by each stay 64 Working pressure by rules 126 End plates in steam space:
 Material Steel Thickness 3/4" Pitch of stays 14 1/4 x 14 1/2 How are stays secured Double nuts Working pressure by rules 124 Material of stays Steel
 Diameter at smallest part 2.66 Area supported by each stay 214 Working pressure by rules 124 Material of Front plates at bottom Steel
 Thickness 11/16 Material of Lower back plate Steel Thickness 5/8" Greatest pitch of stays 14" at wide Working pressure of plate by rules 130 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/4" Material of tube plates Steel Thickness: Front 11/16 Back 5/8" Mean pitch of stays 9 9/16
 Pitch across wide water spaces 14 1/2" Working pressures by rules 156 lbs Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 6 x 1 1/2" Length as per rule 26 29/32 Distance apart 7 3/4 Number and pitch of Stays in each 2 at 8"
 Working pressure by rules 124 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 ✓
 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 *None*

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 Plates 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:— *Two connecting rod top end & two bottom end bolts. Two main bearing bolts. One set coupling bolts. Set of feed & bilge pump valves. Assorted bolts & nuts. Iron.*

The foregoing is a correct description,

James Duncan Manufacturer.

Dates of Survey while building

During progress of work in shops— 1904 July 9. Aug 3. 4. 25. Sept 8. 23. Oct 4. 6

During erection on board vessel—

Total No. of visits 8

Is the approved plan of main boiler forwarded herewith Yes None

“ “ “ donkey “ “ “ None

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

The machinery has been constructed & fitted on board under special survey & the workmanship has been found good. The vessel is eligible in my opinion for the record + L.M.C. 10.04 in the Register.

It is submitted that this vessel is eligible for L.M.C. 10.04.

Arth. L. Jones
19.10.04

Certificate (if required) to be sent to Committee's Minute.

The amount of Entry Fee.. £ 1 : - : When applied for, 17. OCT. 1904

Special £ 8 : - : When received, 19. 10. 04

Donkey Boiler Fee £ : : 19. 10. 04

Travelling Expenses (if any) £ : : 19. 10. 04

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

Committee's Minute Glasgow 17 OCT 1904

Assigned

L.M.C. 10.04
MACHINERY CERTIFICATE WRITER

