

REPORT ON MACHINERY.

Port of Glasgow

Received at London Office JULY 14 FEB 1905

No. in Survey held at Paisley Date, first Survey 11th May 04 Last Survey Feb 2nd 1905
 Reg. Book. 78 Sup on the J. J. "Camosun" (Number of Visits.....)
 Master Built at Paisley By whom built Baird MacLachlan & Co When built 1905
 Engines made at Paisley By whom made Baird MacLachlan & Co when made 1905
 Boilers made at Paisley By whom made do when made 1905
 Registered Horse Power Owners Union Ltd of Brit. Columbia Port belonging to Glasgow
 Nom. Horse Power as per Section 28 224 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 18 1/2, 30, 50 Length of Stroke 36 Revs. per minute Dia. of Screw shaft 10 1/4 Material of screw shaft Steel
 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 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 3' 9"
 Dia. of Tunnel shaft 9 1/4 Dia. of Crank shaft journals 9 1/2 Dia. of Crank pin 10 Size of Crank webs 7 1/2 Dia. of thrust shaft under collars 10 Dia. of screw 12 0 Pitch of screw 13 3/8 No. of blades 4 State whether moveable Yes Total surface 54.6 \$
 No. of Feed pumps 2 Diameter of ditto 3 1/2 Stroke 18 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 14 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 6 1/2 x 4 1/2 x 7 5/8 x 5 3/8 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 - 2 1/2 In Holds, &c. 2 - 2 1/2 each hold

No. of bilge injections 1 sizes 7" Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size Yes - 2 1/2
 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 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 For 2 Suctions How are they protected Wood covering
 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 Yes
 Is it fitted with a watertight door Yes worked from Top grating

BOILERS, &c.— (Letter for record (B)) Total Heating Surface of Boilers 4295.6 \$ Is forced draft fitted No
 No. and Description of Boilers Two Single Ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
 Date of test 21.10.04 Can each boiler be worked separately Yes Area of fire grate in each boiler 71.3 No. and Description of safety valves to each boiler 2 Cock burn Area of each valve 7" Pressure to which they are adjusted 183 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Stokehold Mean dia. of boilers 14 1/8 Length 10 1/2 Material of shell plates Steel
 Thickness 1 1/32 Range of tensile strength 28 000 Are they welded or flanged no Descrip. of riveting: cir. seams D. R. L. long. seams D. B. S.
 Diameter of rivet holes in long. seams 17/16 Pitch of rivets 9 7/8 Lap of plates or width of butt straps 1 - 8 7/8
 Per centages of strength of longitudinal joint rivets 93 plate 85 Working pressure of shell by rules 195 lbs Size of manhole in shell 16 x 12
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Dighton Material Steel Outside diameter 4 0"
 Length of plain part top bottom Thickness of plates crown 19/32 bottom Description of longitudinal joint weld No. of strengthening rings
 Working pressure of furnace by the rules 196 Combustion chamber plates: Material Steel Thickness: Sides 2 1/32 Back 19/32 Top 2 1/32 Bottom 15/16
 Pitch of stays to ditto: Sides 10 x 7 Back 8 x 8 Top 9 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads no Working pressure by rules 182 lbs
 Material of stays Steel Diameter at smallest part 1 5/8 Area supported by each stay 64 x 81 Working pressure by rules 180 End plates in steam space: Material Steel Thickness 1 3/8 Pitch of stays 18 How are stays secured D. nuts Working pressure by rules 260 Material of stays Steel
 Diameter at smallest part 6.98 Area supported by each stay 324 Working pressure by rules 214 Material of Front plates at bottom Steel
 Thickness 7/8 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 14 Working pressure of plate by rules 180 lbs
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 7/8 Back 15/16 Mean pitch of stays 11
 Pitch across wide water spaces 14 Working pressures by rules 190 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre (8 x 7 1/2) Length as per rule 2.9 Distance apart 8 1/2 Number and pitch of Stays in each 2 - 9 1/2
 Working pressure by rules 230 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. 1 Description *Cylindrical Mult.*
 Made at *Paisley* By whom made *Bow MacLachlan & Co.* When made *1905* Where fixed *Main Deck*
 Working pressure *80* tested by hydraulic pressure to *160* No. of Certificate *7194* Fire grate area *7.5* Description of safety valves *Spring loaded*
 No. of safety valves *2* Area of each *3.74* Pressure to which they are adjusted *80 lb* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *5'-0"* Length *6'-0"* Material of shell plates *Steel* Thickness *3/8"* Range of tensile strength *28 lb* Descrip. of riveting long. seams *D. R. L.* Dia. of rivet holes *3/4"* Whether punched or drilled *Drilled* Pitch of rivets *2 1/2"*
 Lap of plating *3 9/16"* Per centage of strength of joint Rivets *7.0-4* Thickness of shell crown plates *—* Radius of do. *—* No. of Stays to do. *—*
 Dia. of stays *—* Diameter of furnace Top *26 1/16"* Bottom *—* Length of furnace *65"* Thickness of furnace plates *1 1/32"* Description of joint *weld* Thickness of furnace crown plates *13/32"* Stayed by *—* Working pressure of shell by rules *94 lb*
 Working pressure of furnace by rules *82 lb* Diameter of uptake *—* Thickness of uptake plates *—* Thickness of water tubes *—*

SPARE GEAR. State the articles supplied:— *1 Tail shaft, set propeller blades, set H.P. piston rings, set I.P. piston rings, pair crank pin brasses, valve spindle, crosshead brasses, quadrant link & saddle block brasses, etc & the bolts & nuts required by the Rules.*

The foregoing is a correct description,
FOR BOW, MACLACHLAN & CO, LTD Manufacturer.

Dates of Survey while building
 During progress of work in shops: *1904: May 11, 19, June 16, 22, 28, July 8, 14, 22, 28, Aug 8, 30, Oct 3, 13, 21, 26*
 During erection on board vessel: *Nov 14, 17, 24, Dec 1, 5, 9, 14, 20, 26, 1905: Jan 10, 13, 19, 24, Feb 2*
 Total No. of visits *29* Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery & boilers of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

*This vessel is in my opinion eligible for notation *L.M.C. 2.05 in the Register Book.*

It is submitted that this vessel is eligible for **THE RECORD** *L.M.C. 2.05 ELEC. LIGHT.*

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Report on this Machinery & Boilers

RS
15.2.05

H Gardner-Smith
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee. . . £ *2* : - :
 Special £ *31* : *4* :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *13 FEB 1905*
 When received, *16/2/05*

Committee's Minute *Glasgow 13 FEB 1905*
 Assigned *+ L.M.C. 2.05*
When fee is paid



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