

## REPORT ON MACHINERY.

No. 14126.

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No. in Survey held at Greenock Date, First Survey 11.2.15: Last Survey 13 March 1917  
Reg. Book. on the S. Steamer Clan Ranald (Number of Visits 163.)Master Built at Glasgow By whom built Nathan Miller Tons } Gross  
When built 1917Engines made at Greenock By whom made John & Kincaid & Co. Ltd when made 1917Boilers made at Greenock By whom made John & Kincaid & Co. Ltd when made 1917Registered Horse Power Owners Cayzer Line Ltd Port belonging to GlasgowNom. Horse Power as per Section 28 555 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted YesENGINES, &c.—Description of Engines Triple compound No. of Cylinders Three No. of Cranks ThreeDia. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 68 Dia. of Screw shaft as per rule 14 9/16 Material of Steel  
as fitted 15 1/8 screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive no If twoliners are fitted, is the shaft lapped or protected between the liners Length of stern bush 60Dia. of Tunnel shaft as per rule 13 1/2 Dia. of Crank shaft journals as per rule 13 9/16 Dia. of Crank pin 14 Size of Crank webs 26 1/2 Dia. of thrust shaft undercollars 14 Dia. of screw 15 1/8 Pitch of Screw 17 1/8 No. of Blades 4 State whether moveable Yes Total surface 105 1/2No. of Feed pumps Two Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work YesNo. of Bilge pumps Two Diameter of ditto 4 1/2 Stroke 27 Can one be overhauled while the other is at work YesNo. of Donkey Engines Three Sizes of Pumps 18-10-7 1/2-5-6 1/2 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room Three 5 1/2 In Holds, &c. Large 5 1/2 Small 5No. of Bilge Injections Two sizes 5 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2Are 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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks bothAre 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 aboveAre 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 YesWhat 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 YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 28-12-16 of Stern Tube 28-12-16 Screw shaft and Propeller 2/2/17Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top Hatch roomMILERS, &c.—(Letter for record S) Manufacturers of Steel Glasgow Shipbuilding Co. Ltd & White & Carter LtdTotal Heating Surface of Boilers 8151 Is Forced Draft fitted Yes No. and Description of Boilers Three single endedWorking Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 4/8/16 No. of Certificate 1260Can each boiler be worked separately Yes Area of fire grate in each boiler 62 1/2 No. and Description of Safety Valves toeach boiler Two Spring Area of each valve 9 1/2 Pressure to which they are adjusted 185 lb Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 31 Mean dia. of boilers 15 1/2 Length 12 1/2 Material of shell plates SteelThickness 1 1/2 Range of tensile strength 28/32 Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams —Long. seams all lap Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2Percentage of strength of longitudinal joint rivets 85 1/2 Working pressure of shell by rules 182 lb Size of manhole in shell 16 1/2Use of compensating ring Hanged ring No. and Description of Furnaces in each boiler 3 Brighton Material Steel Outside diameter 49 1/2Length of plain part top Thickness of plates crown Description of longitudinal joint welded No. of strengthening rings 6Working pressure of furnace by the rules 180 lb Combustion chamber plates: Material Steel Thickness: Sides 10 1/8 Back 10 1/2 Top 10 1/8 Bottom 10 1/8Pitch of stays to ditto: Sides 9 1/2 Back 9 1/2 Top 9 1/2 Bottom 9 1/2 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 180 lbMaterial of stays Steel Diameter at smallest part 1 7/8 Area supported by each stay 66 1/2 Working pressure by rules 181 lb End plates in steam space:Material Steel Thickness 1 7/8 Pitch of stays 2 1/2 How are stays secured Washed Working pressure by rules 180 lb Material of stays SteelDiameter at smallest part 8 1/2 Area supported by each stay 45 2 Working pressure by rules 180 lb Material of Front plates at bottom SteelThickness 1 7/8 Material of Lower back plate Steel Thickness 1 1/2 Greatest pitch of stays 15 Working pressure of plate by rules 180 lbDiameter of tubes 2 1/2 Pitch of tubes 5 1/2 Material of tube plates Steel Thickness: Front 1 7/8 Back 1 1/2 Mean pitch of stays 9 1/2Pitch across wide water spaces 15 Working pressures by rules 187 lb Girders to Chamber tops: Material Steel Depth andThickness of girder at centre 10 1/2 Length as per rule 54 1/2 Distance apart 9 1/2 Number and pitch of stays in each Three 7 1/2Working pressure by rules 183 lb 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

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

Strengthened 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



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