

REPORT ON MACHINERY.

No. 14126

Received at London Office WED. 21 MAR. 1917

Date of writing Report 5 March 1917 When handed in at Local Office 16 March 1917 Port of Greenock

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 Nahin & Miller Tons } Gross
When built 1917 } Net

Engines made at Greenock By whom made John & Kincaid & Co Ltd when made 1917

Boilers made at Greenock By whom made John & Kincaid & Co Ltd when made 1917

Registered Horse Power Owners Cayzer Line Ltd Port belonging to Glasgow

Nom. Horse Power as per Section 28 555 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple compound No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 1.96 Material of screw shaft as fitted 1.50

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 No 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 No If two

liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 60

Dia. of Tunnel shaft as per rule 1.5 Dia. of Crank shaft journals as per rule 1.99 Dia. of Crank pin 1.4 Size of Crank webs 26.9 Dia. of thrust shaft under

collars 1.4 Dia. of screw 1.5 Pitch of Screw 17.8 No. of Blades 4 State whether moveable Yes Total surface 105 sq ft

No. of Feed pumps Three Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Bilge pumps Two Diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 18-10-7-5-6-5 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3/2 In Holds, &c. Large 3/2 Tunnels

No. of Bilge Injections two sizes Connected to condenser, or to circulating pump both Is a separate Donkey Suction fitted in Engine room & size two 3/2

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 both

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 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

Dates of examination of completion of fitting of Sea Connections 28-12-16 of Stern Tube 28-12-16 Screw shaft and Propeller 2/2/17

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top Platform

MILERS, &c.—(Letter for record S) Manufacturers of Steel Glasgow Steel Works & Shipbuilding Co Ltd

Total Heating Surface of Boilers 8151 Is Forced Draft fitted Yes No. and Description of Boilers Three Single End

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 4/8/16 No. of Certificate 1260

Can each boiler be worked separately Yes Area of fire grate in each boiler 62 sq ft No. and Description of Safety Valves to

each boiler two Spring Area of each valve 9.62 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 31 Mean dia. of boilers 15.6 Length 12.0 Material of shell plates steel

Thickness 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 5/16 Pitch of rivets 9/16 Lap of plates or width of butt straps 19 1/2

Percentages of strength of longitudinal joint rivets 85.2 Working pressure of shell by rules 182 lbs Size of manhole in shell 16-12

Use of compensating ring Hanged No. and Description of Furnaces in each boiler 3 Brighton Material steel Outside diameter 49 1/2

Length of plain part top Thickness of plates crown 9/16 Description of longitudinal joint welded No. of strengthening rings Conway

Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material steel Thickness: Sides 10/16 Back 19/32 Top 10/16 Bottom 14/16

Thickness of stays to ditto: Sides 9 3/4-7 1/2 Back 9-8 1/2 Top 9 3/4-7 1/2 If stays are fitted with nuts or riveted heads both Working pressure by rules 180 lbs

Material of stays steel Diameter at smallest part 1.79 Area supported by each stay 66 Working pressure by rules 181 lbs End plates in steam space:

Material steel Thickness 1 5/16 Pitch of stays 2 1/2 How are stays secured both Working pressure by rules 180 lbs Material of stays steel

Diameter at smallest part 8-12 Area supported by each stay 452 Working pressure by rules 186 lbs Material of Front plates at bottom steel

Thickness 1 5/16 Material of Lower back plate steel Thickness 1 1/2 Greatest pitch of stays 15 Working pressure of plate by rules 185 lbs

Diameter of tubes 2 1/2 Pitch of tubes 3 3/4-3 1/4 Material of tube plates steel Thickness: Front 1 5/16 Back 1 1/2 Mean pitch of stays 9.5

Thickness across wide water spaces 13 Working pressures by rules 187 lbs Girders to Chamber tops: Material steel Depth and

Thickness of girder at centre 10 1/2-1 1/2 Length as per rule 54-6 Distance apart 9 1/2 Number and pitch of stays in each Three 7 1/2

Working pressure by rules 183 lbs 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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two 5th end bolts. Two bottom end bolts. Two main bearing bolts. One lat coupling bolt. One cut and pump valve. One cut bridge pump valve. One main crank pin bushes. One pair 5th end bushes. Bolts nuts &c. Propeller shaft. One cut from Safford blade. 1 cut check valve. Two safety valve springs &c.

The foregoing is a correct description,

For and on behalf of JOHN G. KINCAID & COY., LIMITED

J. Kincaid

Director

Manufacturer.

Dates of Survey while building: During progress of work in shops (1915) Feb. 11-26, Mar. 5-8, 10-18, 23-25, Apr. 1-6, 7-15, 16-19, 22-23, 24-27, May 3-4, 6-8, 11-13, 21-25, 31, June 8-11, 15-18, 25-27, July 12-20, 22-23, 26-27, 28, Aug. 3-14, 17, 21, 22-25, 27, Oct. 1-3, 7-9, 15-17, 24-30, Nov. 2-5, 8-12, 15-19, 21-22, 25-27, 29, Dec. 2-16, 20-23, 30-31 (1916), Jan. 7-10, 12-14, 17-19, Feb. 3-7, Mar. 14, 17, 21, 25, 27, Apr. 1-13, 18, 20-22, 25-27, Oct. 2-4, 6-9, 10-13, 17, 20, 24-26, Nov. 1-8, 10, 14, 17, 21, 22-25, 27, Dec. 1-6, 8-12, 13-15, 20-22, 29 (1917), Jan. 7-8, 10-16, 18-22, 30, Feb. 2-5, 7-12, 14-19, 22-23, 26, Mar. 1-13.

Dates of Examination of principal parts: Cylinders 13/9/16, Slides 13/9/16, Covers 13/9/16, Pistons 15/12/16, Rods 13/9/16

Connecting rods 24/10/16, Crank shaft 24/10/16, Thrust shaft 24/10/16, Tunnel shafts 24/10/16, Screw shaft 15/12/16, Propeller 15/12/16

Stern tube 21/11/16, Steam pipes tested at Glasgow 22/1/17, Engine and boiler seatings 29/12/16, Engines holding down bolts 22/1/17

Completion of pumping arrangements 22/1/17, Boilers fixed 30/1/17, Engines tried under steam 19/2/17

Main boiler safety valves adjusted 19/2/17, 24/2/17, Thickness of adjusting washers P 1 1/2 - 5 1/16 - P 1/4 - 5 2/16 - P 1/4 - 5 25/16

Material of Crank shaft 1 Unit Identification Mark on Do. 4585, Material of Thrust shaft 1 Unit Identification Mark on Do. 5440

Material of Tunnel shafts 1 Unit Identification Marks on Do. 4537, Material of Screw shafts 1 Unit Identification Marks on Do. 4548

Material of Steam Pipes Main from Amal steel, Test pressure Main 500 lb Amal boiler

Is an installation fitted for burning oil fuel Yes, Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with Yes, Is this machinery duplicate of a previous case Yes, If so, state name of vessel "Clare Stewart" 30th May 1906

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

The machinery and boilers of this steamer have been constructed under special survey, and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the same is respectfully submitted for the ratification of L.M.C. 3. 17 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 3. 17. F.D.

J.W.D. 27/3/17
James James
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

The amount of Entry Fee ...	£ 9 : -	When applied for,	16. 3. 1917
Special ...	£ 46 : 18	When received,	16. 4. 1917
Donkey Boiler Fee ...	£ :		
Travelling Expenses (if any) £	:		

Committee's Minute GLASGOW. 20 MAR 1917
Assigned + L.M.C. 3, 17 F.D.

Greenock

Certificate (if required) to be sent to the Registrar of Shipping (Committee's Minute).

