

Rpt. 4.

REPORT ON MACHINERY.

Lon Rpt 82801

No. 293957

Date of writing Report 25 Feb 1920
Date of Survey held at Paisley & Lowestoft Date, First Survey 1. 7. 19 Last Survey 7 Feb 1920
Reg. Book. on the machinery of S.S. "Fort Lavenock" (Number of Visits 11.)
Master Built at Lowestoft By whom built Colby Bros. Ltd (104) Tons Gross 1220 Net 1119
Engines made at Paisley By whom made Campbell & Caldwell (968) when made 1919.
Boilers made at Govan By whom made Forth S/S & Engineering Co (1680) when made 1919.
Registered Horse Power Owners Fort Shipping Co Ltd Port belonging to Cairniff
Nom. Horse Power as per Section 28 82 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted No

ENGINES, &c.—Description of Engines Compound Expansion No. of Cylinders 2 No. of Cranks 2
Dia. of Cylinders 18" - 38" Length of Stroke 24" Revs. per minute 8.3" Material of screw shaft 5
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 Yes If two
liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 2' 9 1/2"
Dia. of Tunnel shaft as per rule 4.33" Dia. of Crank shaft journals as per rule 4.9" Dia. of Crank pin 8 1/4" Size of Crank webs 15 1/2" x 5 1/2" Dia. of thrust shaft under
collars 8 1/8" Dia. of screw 9" - 6" Pitch of Screw 12" - 6" No. of Blades 4 State whether moveable No Total surface 35 1/2" ft
No. of Feed pumps one Diameter of ditto 2 1/8" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
No. of Bilge pumps one Diameter of ditto 2 1/8" Stroke 13 1/2" Can one be overhauled while the other is at work Yes
No. of Donkey Engines Two Sizes of Pumps 5" x 3 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Three 3" 6" x 6" x 6" In Holds, &c. Two 2 1/4" Fore Peak one 3"
After Peak one 3"
No. of Bilge Injections one size 4 1/2" Connected to condenser, or to circulating pump c.p.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 Yes
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 Bilge Suctions How are they protected Wood Casings
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
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel David Colville & Sons.
Total Heating Surface of Boilers 1486 Is Forced Draft fitted No No. and Description of Boilers See Gls. Rpt. 39244
Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 18-10-19 No. of Certificate 14951
Can each boiler be worked separately Yes Area of fire grate in each boiler 49.75 sq. ft. No. and Description of Safety Valves to
each boiler Two Direct Spring Area of each valve 7.06 sq. in. Pressure to which they are adjusted 135 lbs. Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork 2' 6" Mean dia. of boilers Length Material of shell plates
Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams
long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
Per centages of strength of longitudinal joint rivets. Working pressure of shell by rules Size of manhole in shell
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom Thickness of plates bottom
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to girth: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules
Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays
Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across side water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
Working pressure by rules No. 1 Steam dome: description of joint to shell % of strength of joint
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed
SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

005436-005442-0071

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two connecting rod top & bottom end bolts & nuts
2 main bearing bolts & nuts. 1 set Coupling bolts. 1 set of feed & discharge pump valves.
1 spare propeller. Quantity of assorted bolts & nuts and iron of various sizes.

The foregoing is a correct description,

Campbell & Calderwood
Glasgow

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1919. July 1. Aug 5. Sept. 23. 25. 26. Oct 6. P. 14. 17. 22. 31.
1919. Aug 23. Oct 31. Nov 19. 25. Dec 9. 18 (1919) Jan 1. 15. 21. 23. 28. 31 Feb 2 5
25.

Is the approved plan of main boiler forwarded herewith ✓

Dates of Examination of principal parts—Cylinders 23.9.19 Slides 25.9.19 Covers 25.9.19 Pistons 25.9.19 Rods 25.9.19
Connecting rods 25.9.19 Crank shaft 1.4.19 Thrust shaft 1.4.19 Tunnel shafts ✓ Screw shaft 1.4.19 Propeller 1.4.19
Stern tube 1.4.19 Steam pipes tested 23-1-20 Engine and boiler seatings 31-10-19 Engines holding down bolts 9-12-19
Completion of pumping arrangements 31-1-20 Boilers fixed 15-1-20 Engines tried under steam 31-1-20
Completion of fitting sea connections 26-8-19 Stern tube 26-8-19 Screw shaft and propeller 21-8-19. 26-8-19
Main boiler safety valves adjusted 31-1-20 Thickness of adjusting washers P 5/8". 5 3/8"
Material of Crank shaft Steel ✓ Identification Mark on Do. 1.7.19 Material of Thrust shaft Steel ✓ Identification Mark on Do. 1.7.19
Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel ✓ Identification Marks on Do. 1.7.19
Material of Steam Pipes Lap welded steel Test pressure 390 lbs.
Is an installation fitted for burning oil fuel No 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 ✓

Is this machinery duplicate of a previous case No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines have been built in accordance with the approved plan & the Rules of the Society.

The workmanship and material used are of good quality.

The engines have now been despatched to Lowestoft at which port they will be fitted on board the vessel.

The Engine and Boiler examined whilst being installed in the vessel, afterwards tried under steam, safety valves adjusted to 135 lbs, and all found satisfactory, and is now eligible in our opinion to have the Record L.M.C. 2.20 in the Register Book.

It is submitted that this vessel is eligible for

THE RECORD L.M.C. 2.20

The amount of Entry Fee ... £ 1 : -

Special ... £ 4 : 4

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ 2 : 18

Committee's Minute

Assigned Deferred.

When applied for,

25.11.19

When received,

4/12/19

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from hon 8/12/19

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W. Fraser Robert Rae

Engineer Surveyor to Lloyd's Register of Ships

A. E. Farminer

FRI. 19 MAR. 1920

Lloyd's Register Foundation