

REPORT ON MACHINERY

No. 34885
RECEIVED
WED. JUN 12 1918

Received at London Office

Date of writing Report 10 When handed in at Local Office 10 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 31/5/18 Last Survey 28/5/1918
Reg. Book. on the SS "Clan Mackenzie" (Number of Vents)

Master Built at By whom built Tons { Gross Net
When built

Engines made at Glasgow By whom made J.W. Henderson & Co. Ltd (575) when made 1918
Boilers made at By whom made when made

Registered Horse Power Owners Port belonging to
Nom. Horse Power as per Section 28 (610) 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 27"-44"-73" Length of Stroke 48 Revs. per minute 78 Dia. of Screw shaft as per rule as fitted Material of screw shaft
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight in the propeller boss

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

Dia. of Tunnel shaft as per rule 3.319 as fitted Dia. of Crank shaft journals as per rule 13.99 as fitted 14.2 Dia. of Crank pin 14.2 Size of Crank webs 9.22 Dia. of thrust shaft under collars Dia. of screw 18-6 Pitch of Screw 17-3 No. of Blades 4 State whether moceable Yes Total surface 100 sq

No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room In Holds, &c.

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

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they sized sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges
Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

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

BOILERS, &C.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers 9837 Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to each boiler
Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 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 plate 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

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Diameter 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

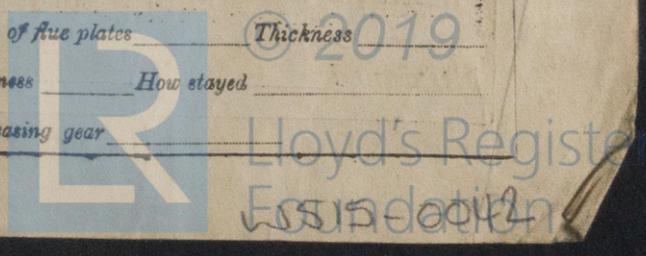
Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
Pitch across wide 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 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

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



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— 2 top end, 2 bottom end, 2 main bearing + 3 crank shaft, bolt & nuts, feed & bilge pump, suction & discharge valves, 6 aft. covers, 6 steam chest + 12 pin & ring, bolts & nuts, 6 air p. valves. Packing for piston rods & valve spindles. 1 spring for feed pump escape valve, 1 valve den for main engine stop valve - 1 filter bucket. 56 Coir felts for filter. 1 set Cir. p. piston rings. 1 crank pin ^{main bearing} + 1 crownhead bush, in valves for Cir. p. Assorted bolts nuts & iron

The foregoing is a correct description.

J. Y. Peterkin

Manufacturer.

Dates of Survey while building: During progress of work in shops - 19th May 3, July 4, 5, Aug 17, 20, 24, Sept 6, 18, 27, Oct 1, 2, 8, 9, 18, 22, 24, 31, Nov 9, 12, Dec 11, 21. During erection on board vessel - 24 1918, Jan 7, 10, 14, 16, 25, Feb 4, 5, 7, 12, 21, 26, 28, Mar 12, 21, 22, 25, Apr 17, 26, 30, May 6, 14, 22, 28. Total No. of visits 45.

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts - Cylinders 7/2/18 Slides 7/2/18 Covers 7/2/18 Pistons 7/2/18 Rods 7/2/18 Connecting rods 7/2/18 Crank shaft 4/12/18 Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft *Steel* Identification Mark on Do. *070 11/2/18* Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 If so, state name of vessel

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

These engines have been built under special survey the materials and workmanship are of good description. They have now been forwarded to Portsmouth where they are to be fitted on board the vessel.

Committee's Minute

The amount of Entry Fee ... £ 54 15 6
Special ...
Donkey Boiler Fee ...
Travelling Expenses (if any) £

When applied for, 11.6.1918
When received, 12.8.1918
A. McKeand
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute GLASCOW 11 JUN 1918
Assigned TRANSMIT TO LONDON
FRI. 13 SEP. 1918
TUE. 11 NOV. 1919
FRI. MAR. 19 1920
FRI. 5 DEC. 1919

