

Sou. Nbr. No. 10806.

Rpt. 4.

# REPORT ON MACHINERY.

No. 39414

Received at London Office

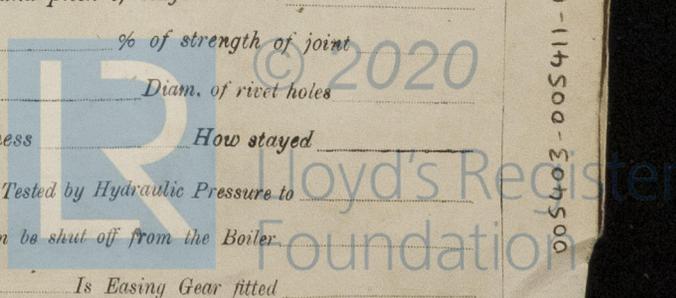
Date of writing Report 19 When handed in at Local Office 29.11.19 Port of **GLASGOW** Date, First Survey 2.5.19 Last Survey 29.10.19  
No. in Survey held at **Glasgow** Reg. Book. on the **S.S. "SOJOURNER"** (Number of Visits 11)

Master Built at **Losport** By whom built **Campbell Nicholson Ltd (285)** Tons Gross 435 Net 200.2  
Engines made at **Glydebank** By whom made **Crichton Blair Ltd (124)** when made 1919  
Boilers made at **Glasgow** By whom made **Forth Shipbuilding & Eng. Co Ltd** when made 1919  
Registered Horse Power Owners **Robinson, Brown & Co Ltd** Port belonging to **Newcastle**  
Nom. Horse Power as per Section 28 **912 42** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

**ENGINES, &c.**—Description of Engines **Compound** No. of Cylinders **2** No. of Cranks **2**  
Dia. of Cylinders **18" 38"** Length of Stroke **24"** Revs. per minute Dia. of Screw shaft as per rule **8 1/4"** Material of screw shaft **St**  
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 **2' 9 1/2"**  
Dia. of Tunnel shaft as per rule **7.53"** Dia. of Crank shaft journals as per rule **4.91"** Dia. of Crank pin **8 1/4"** Size of Crank webs **15 1/4" x 5 1/2"** Dia. of thrust shaft under collars **8 1/8"** Dia. of screw **9 1/6"** Pitch of Screw **12' 6"** No. of Blades **4** State whether moveable **No** Total surface **352 sq ft**  
No. of Feed pumps **1** Diameter of ditto **2 3/8"** Stroke **13 1/2"** Can one be overhauled while the other is at work **✓**  
No. of Bilge pumps **1** Diameter of ditto **2 3/8"** Stroke **13 1/2"** Can one be overhauled while the other is at work **✓**  
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 **1** sizes **4 1/2"** 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 fixed 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  
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 Is Forced Draft fitted No. and Description of Boilers  
Working Pressure **130 Lb/sq in** 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 bottom Thickness of plates crown bottom 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 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 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 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  
**UPERHEATER.** 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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Bottom end Bolts & Nuts, 2 Top end, 2 Main bearing & 6 Coupling Bolts & Nuts, 1 Set Air Pump Valves, 1 Set Feed, 1 Set Bridge & 1 Set Circulating Pump Valves, 1 Head Valve Escape Valve Spring, 6 Cylinder Cover Studs & Nuts, 6 Steam Chest Studs & Nuts, 6 Gunk Ring Studs & Nuts, 6 Condenser Tubes & 12 Condenser Circles, 1 Bull Packing Cord, 1 Set Eye bolts for Pistons 3/8 to 5/8, 1 Set Spanner 9/16 to 1/2, 2 Slitting Spanners, 1 Box Spanner for gunk Ring Nuts & 1 for Piston Valve Pin, 1 Crowfoot Spanner for Valve Rod Nuts, 1 Ring Spanner for Top and Bottom end nuts, 1 for Main Bearings & 1 for Piston Rod Nuts, 1 Jaw Spanner for Air Pump Nut & 1 for Coupling Nuts, 1 Set Crank Shaft & Gudgeon Pin

The foregoing is a correct description.

AITCHISON, BLAIR LTD.

Arch Blair

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919. May 2. 5. 14. 16. July 1. 31. Sept. 15. 18. Oct. 8. 20. 29. During erection on board vessel - - - } Total No. of visits 11.

Is the approved plan of main boiler forwarded herewith

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Dates of Examination of principal parts—Cylinders 1.4.19 Slides 15.9.19 Covers 15.9.19 Pistons 15.9.19 Rods 15.9.19 Connecting rods 15.9.19 Crank shaft 1.4.19 Thrust shaft 16.5.19 Tunnel shafts None Screw shaft 18.9.19 Propeller 14.5.19 Stern tube 15.9.19 Steam pipes tested Engine and boiler seatings Engines holding down bolts Completion of pumping arrangements Boilers fixed Engines tried under steam Completion of fitting sea connections Stern tube Screw shaft and propeller Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft S Identification Mark on Do. 124 M 7.19 Material of Thrust shaft S Identification Mark on Do. 124 M 5.15 Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shafts S Identification Marks on Do. 124 M 18.9.19 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.)

The above Machinery has been built under Special Survey. The workmanship and materials are good and they have been well fitted together. Machinery is being forwarded to Messrs Camper & Nicholson, Liverpool, to be fitted on board their No. 285.

The above machinery has been efficiently fitted on board, and on trial proved satisfactory.

Glasgow.

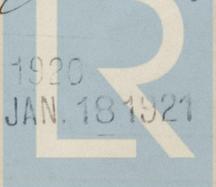
HC. 29.11.19

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

The amount of Entry Fee ... £ : : When applied for. Special ... £ 4-13-4 : : 19 Donkey Boiler Fee ... £ : : When received, 30/9/19 Travelling Expenses (if any) £ : : 30/3/20

Committee's Minute GLASGOW 2 DEC 1919 Assigned Transmit to London

J. H. Murray & A. H. Boyle Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation

24 APR 19 Secretary, Lloyd's