

REPORT ON MACHINERY.

No. 39514

Received at London Office

WED. 17 JUN 1920

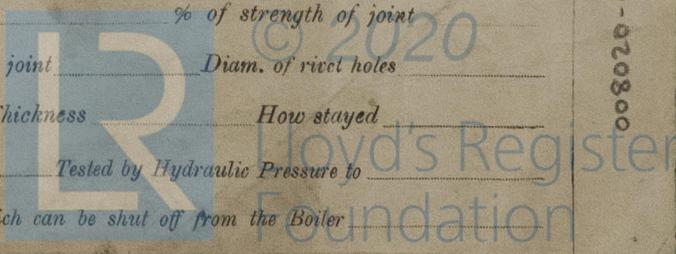
Date of writing Report 19 When handed in at Local Office 3-1-1920 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 14.7.19. Last Survey 1.12.1919.
 on the main engine No 746 of Douglas & Sons Vancouver B.C. Number of Visits 17
 Master Built at By whom built Tons } Gross
 Engines made at Glasgow By whom made W. Rowan & Co Ltd (No 746) when made 1919 } Net
 Boilers made at By whom made when made
 Registered Horse Power Owners Port belonging to
 Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

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 — Dia. of Screw shaft as per rule — Material of screw shaft as fitted —
 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 — Dia. of Crank shaft journals as per rule 13.9" Dia. of Crank pin 14 1/2" Size of Crank webs 28x9" Dia. of thrust shaft under collars — Dia. of screw — Pitch of Screw — No. of Blades — State whether moveable — Total surface —
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work —
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" 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 — 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 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 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. Working pressure of shell by rules Size of manhole in shell
 plate. 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. 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

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



008020-008027-0100

18. A DONKEY BOILER FITTED?

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied: —

2. Top end bolts and nuts 2 bottom end bolts and nuts, 2 main bearing bolts and nuts, 1 set coupling bolts and nuts, set of feed and bilge pump valves, assorted iron bolts and nuts and other articles as required by specification.

The foregoing is a correct description,

David Cowan & Co Ltd Glasgow Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1919 July 14 Aug 22 Sept 16-25 Oct 1-2-9-15-22-28-30 Nov 3-5-10-21-27 Dec 1
During erection on board vessel ---
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith —

Dates of Examination of principal parts—Cylinders 3.11.19 Slides 25.9.19 Covers 3.11.19 Pistons 30.10.19 Rods 30.10.19

Connecting rods 10.11.19 Crank shaft 2.10.19 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 —

Completion of fitting sea connections — Stern tube — Screw shaft and propeller —

Main boiler safety valves adjusted — Thickness of adjusting washers —

Material of Crank shaft Steel Identification Mark on Do. A H 962

Material of Tunnel shafts — Identification Marks on Do. — Material of Thrust shaft — Identification Mark on Do. —

Material of Steam Pipes — Identification Marks on Do. — Material of Screw shafts — Identification Marks on Do. —

Is an installation fitted for burning oil fuel — Test pressure —
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 main engines have been constructed under Special Survey in accordance with the Rules and approved Plans, materials and workmanship are good.

The engines from after end of crank shaft up to the engine stop valve, have now been despatched to Messrs J. Coughlan & Sons Vancouver B.C.

The work covered by the specification has been satisfactorily carried out, with the exception that the Contraflo attachment for the Condenser, which is being supplied by the Contraflo Co, has not been fitted in place. The makers state that arrangements are being made for this work to be completed on arrival of the engines in Canada.

Glasgow Certificate Herewith

The amount of Entry Fee ... £ :
Special ... £ 50 : 0 :
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, London 9/11/1920
When received, 1/3/1920

Jas Easthope
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 - JAN 1920

Assigned No action

TUE. APR. 25 1922
TUE. 7 NOV. 1922

FRI. 17 NOV. 1922



TUE. NOV. 30 1920 TUE. JUL. 25 1921