

REPORT ON MACHINERY.

No. 4591

MON. MAY 31 1920

Received at London Office

t. 4.

of writing Report

When handed in at Local Office

29-5-1920 Port of

MANCHESTER

Survey held at

BRADFORD

Date, First Survey 25-4-18

Last Survey 17-5-1920

(Number of Visits 16)

Book

on the "A" class Standard Engine No. 3418

Tonnage

Gross

Net

Survey held at

Built at Vulcan B.C. By whom built J. Cuyler & Son

When built 1919.5

Repairs made at

Bradford

By whom made

Cole Marchant & Morley Ltd.

when made 1920.

Repairs made at

Vulcan B.C.

By whom made

J. Cuyler & Son

when made 1919.

Registered Horse Power

Owners

E. J. Cullum & S. C. Contamin Port belonging to Suez.

Horse Power as per Section 28 518 536

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

DETAILS, &c.

Description of Engines INVERTED TRIPLE EXPANSION No. of Cylinders 3 No. of Cranks 3

of Cylinders 27" 4" 73" Length of Stroke 48" Revs. per minute Dia. of Screw shaft as per rule Material of screw shaft as fitted

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

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

The bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two

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

Shaft as per rule Dia. of Crank shaft journals as per rule 13.99" Dia. of Crank pin 14.5" Size of Crank webs 28" x 9" Dia. of thrust shaft under as fitted 14.5"

Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room In Holds, &c.

Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

The bilge suction pipes fitted with roses Are the hoses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

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

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

How are they protected

Pipes are carried through the bunkers

Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

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

DETAILS, &c. (Letter for record) Manufacturers of Steel

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

Each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to

boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Least 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

Seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Percentage of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Thickness 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

of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:

Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom

at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules

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

each 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

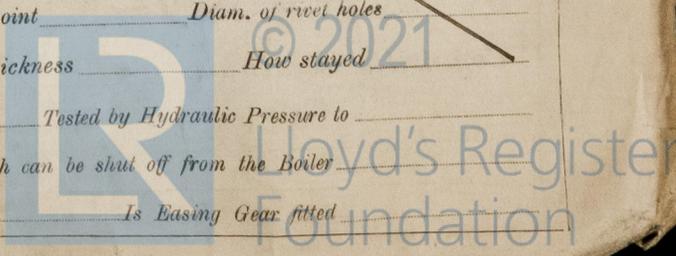
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

each 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



2510-2511

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 main bearing bolts and nuts, 2 connecting rod top end bolts and nuts, 2 connecting rod bottom end bolts and nuts.

- 1. Set of Feed & bilge pump valves, 6 coupling bolts, 6 cylinder cover studs & nuts
6. Steam chest cover studs & nuts, 12 girth ring studs & nuts, 1 Spring for feed pump escape valve
1. Valve disc for main engine stop valve, 1. Filter bucket, 1 Set of piston rings for circulating pump engine, 1. Crosshead bush in halves for ditto, 1 Crank pin bush in halves for ditto
1. Main bearing bush for each side for ditto

The foregoing is a correct description,

SOLE MARCHENT & MORLEY, LIMITED

Handwritten signature of the manufacturer

Manufacturer.

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

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders, Slides, Covers, Pistons, Rods

Connecting rods, Crank shaft, 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, Identification Mark on Do., 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.)

This triple expansion steam engine has been built under Special Sur and the materials tested in accordance with the rules of this Society. The materials and workmanship, so far as can be seen, are sound and good and the machinery is eligible in my opinion to be classed with record of L.M.C. with date when installed on board.

These engines now John G. Kincaid & Co Ltd No 558 as per Drawing letter of 23.2.22 (E) have now been fitted on board The Iron Horse

W. Law, Grimsby, 6 Nov 1922

The amount of Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses (if any)

Handwritten signature of A. Campbell, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned, Not for Committee

FRI. 25 MAY. 1923

TUE OCT. 9 1923

FRI. 9 NOV. 1923

FRI AUG. 10 1923

+ NE 1122 on Gen. Rpt.

No. 18042

TUE. 17 APR. 1923

GLASGOW 14 NOV 1922

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