

REPORT ON MACHINERY.

No. 50720
THU. MAY 27 1920

Received at London Office

Date of Survey Report

19

When handed in at Local Office

19

Port of Liverpool

No. in Survey held at Acrafair
Reg. Book.

Date, First Survey Jan 8/19

Last Survey May 18 1920

(Number of Visits 14)

Gross 71

Tons

Net 1

When built 1933

Master

Built at

Bowling

By whom built

Scott & Sons

Engines made at Acrafair

By whom made Hughes & Lancaster, Ltd.

when made 1920

Boilers made at Glasgow

By whom made A. & W. Dalglisk

when made

Registered Horse Power

Owners The Lords Commissioners of the Admiralty 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 92", 152", 26"

Length of Stroke 18"

Revs. per minute 140

Dia. of Screw shaft

as per rule 5 1/4" Material of Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner

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 2' 1"

Dia. of Tunnel shaft

as per rule None

Dia. of Crank shaft journals

as per rule 5 1/4"

Dia. of Crank pin 5 1/4"

Size of Crank webs 10" x 3 1/2"

Dia. of thrust shaft under

collars 5 1/4"

Dia. of screw 6' 9"

Pitch of Screw 8' 6"

No. of Blades 4

State whether moveable No

Total surface 18 sq. ft.

No. of Feed pumps One

Diameter of ditto 2"

Stroke 9"

Can one be overhauled while the other is at work

No. of Bilge pumps One

Diameter of ditto 2"

Stroke 9"

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

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

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

If a Report also sent on the Hull of the Ship?

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2020
Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 Connecting rod top and 2 bottom end bolts, 2 Main bearing bolts, 1 Set of coupling bolts, 1 Set of feed and 1 set of bilge pump valves, 1 Set of air and 1 set of circulating pump valves, 6 Condenser tubes and 12 ferrules, 24 assorted bolts and nuts, 6 Cylinder cover studs and nuts, 6 Junk ring bolts and nuts, Set of spanners with racks as follows:— open ended spanner for main bearings, 1 do for connecting rod top end bolts, 1 do for connecting rod bottom end bolts, 1 do for piston rod nuts, 1 do for piston rod glands, 1 do for slide spindle glands, 1 do spanner for junk ring bolts, 1 open ended spanner for coupling bolts, 1 set of spanners from $\frac{3}{8}$ to $\frac{1}{2}$, 1 spanner for cylinder cover nuts, 1 spanner for HP valve gear cap screw block, 1 set of eye bolts, 1 claw foot spanner for slide valve spindle nuts.

The foregoing is a correct description,

J W Hawkiss

MANAGER.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919: Jan 2, 22, 24, Feb 24, March 6, April 25, May 1, July 22, Sept 17, Nov 10, - 1920: Jan 22, Feb 27, April 16, May 12
During erection on board vessel ---
Total No. of visits 14

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 24/1/19 27/2/19 Slides 21/1/19 24/2/19 Covers 21/1/19 24/2/19 Pistons 21/1/19 24/2/19 Rods 21/1/19 24/2/19

Connecting rods 24/4/19 Crank shaft 24/4/19 Thrust shaft 24/4/19 Tunnel shafts 24/4/19 Screw shaft 24/4/19 Propeller 2/5/20

Stern tube 22/7/19 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 Steel Identification Mark on Do. 3507 Material of Thrust shaft Steel Identification Mark on Do. 8188

Material of Tunnel shafts Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 8188

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 and in accordance with the Admiralty Specification. The materials and workmanship are good. In my opinion, they are eligible for the Society's classification.

The Engines are at the Makers' Works pending further instructions from the Admiralty.

The amount of Entry Fee ... £ : : When applied for,

Special ... £ 9 : 0 : 19

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 4/8/19

B. G. DeFord

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

26 MAY 1920

FRI. 12 FEB. 1938

Assigned

Transmit to London

CHK



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