

## REPORT ON MACHINERY.

No. 17453.

Received at London Office

THU. 22 MAY. 1919

Date of writing Report 3 May 1919 When handed in at Local Office 12 May 1919 Port of Greenock

No. in Survey held at Greenock

Date, First Survey 8th June, 1917, Last Survey 10 May 1919

Reg. Book.

on the Old Steam Bergondier

(Number of Visits 97.)

Gross 5287.29.

Net 3221.69.

When built 1919

Master J. C. Berna; Built at Greenock

By whom built Caird &amp; Co. Ltd.

Engines made at Greenock

By whom made Caird &amp; Co. Ltd.

when made 1919

Boilers made at Greenock

By whom made Caird &amp; Co. Ltd.

when made 1919

Registered Horse Power

Owners Lloyd Royal Belge (Great Britain), Ltd. Port belonging to London

Nom. Horse Power as per Section 28 517

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines Triple compound

No. of Cylinders Three

No. of Cranks Three

Dia. of Cylinders 27" - 44" - 75" Length of Stroke 48"

Revs. per minute 77

Dia. of Screw shaft

as per rule 14.68

Material of screw shaft

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 60 1/2"

Dia. of Tunnel shaft

as per rule 13.33

Dia. of Crank shaft journals

as per rule 13.99

Dia. of Crank pin 1 1/4"

Size of Crank webs 28" x 9"

Dia. of thrust shaft under

Collars 1 1/4"

Dia. of screw 17.6"

Pitch of Screw 16.6"

No. of Blades 4

State whether moveable No

Total surface 98.2 sq ft

No. of Feed pumps 1

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 1

Diameter of ditto 4"

Stroke 24"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 1

Sizes of Pumps 7" x 18" - 1 1/4" x 2 1/4"

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

In Engine Room 7 mm 3 1/2"

In Holds, &amp;c. 1/2"

Jammed 5"

Circulating Pump Separate Engine

No. of Bilge Injections 1

sizes 12"

Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room &amp; size 7 mm 3 1/2"

Are all the bilge suction pipes fitted with roses Yes

Are the roses in Engine room always accessible Yes

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Yes

Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes

Are the Discharge Pipes above or below the deep water line both

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

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 Yes

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

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from Top of Main

OILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel

Cottrell Sons &amp; Beadmore

Total Heating Surface of Boilers 7668 sq ft

Is Forced Draft fitted Yes

No. and Description of Boilers Three Single Ended

Working Pressure 180 lb

Tested by hydraulic pressure to 360 lb

Date of test 23 May 1918

No. of Certificate 1544

Can each boiler be worked separately Yes

Area of fire grate in each boiler 653 sq ft

No. and Description of Safety Valves to

each boiler 1 in Spring

Area of each valve 9.62 sq in

Pressure to which they are adjusted 185 lb

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 24"

Mean dia. of boilers 15.6"

Length 11.6"

Material of shell plates Blue

Thickness 1 1/4"

Range of tensile strength 28-32

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams all lap

Diameter of rivet holes in long. seams 19/16"

Pitch of rivets 9/16"

Lap of plates or width of butt straps 19/16"

Per centages of strength of longitudinal joint

rivets 88.3 %

plate 85.4 %

Working pressure of shell by rules 182 lb

Size of manhole in shell

16" x 12"

Size of compensating ring Flanged

No. and Description of Furnaces in each boiler 3 Highways

Material Blue

Outside diameter 50 1/4"

Length of plain part

top 19 1/2"

Thickness of plates

crown 19 1/2"

Description of longitudinal joint welded

No. of strengthening rings 1

Working pressure of furnace by the rules 182 lb

Combustion chamber plates: Material Blue

Thickness: Sides 2 1/2"

Back 1 1/4"

Top 2 1/2"

Bottom 2 1/2"

Pitch of stays to ditto: Sides 10 1/2"

Back 10 1/2"

Top 10 1/2"

Bottom 10 1/2"

If stays are fitted with nuts or riveted heads

Working pressure by rules 180 lb

Material of stays Blue

Area at smallest part 2.43 sq in

Area supported by each stay 98.1 sq in

Working pressure by rules 222 lb

End plates in steam space:

Material Blue

Thickness 1 1/2"

Pitch of stays 2 1/4"

How are stays secured all nut

Working pressure by rules 181 lb

Material of stays Blue

Area at smallest part 8.29 sq in

Area supported by each stay 473 sq in

Working pressure by rules 182 lb

Material of Front plates at bottom Blue

Thickness 3/4"

Material of Lower back plate Blue

Thickness 2 1/2"

Greatest pitch of stays 13 1/2"

Working pressure of plate by rules 187 lb

Diameter of tubes 2 3/4"

Pitch of tubes 4" x 3 1/2"

Material of tube plates Blue

Thickness: Front 5 1/2"

Back 12 1/4"

Mean pitch of stays 9.81"

Pitch across wide water spaces 13 1/2"

Working pressures by rules 181 lb

Girders to Chamber tops: Material Blue

Depth and

thickness of girder at centre 10" x 1 1/4"

Length as per rule 35.56"

Distance apart 10 1/2"

Number and pitch of stays in each

Three 9 1/2"

Working pressure by rules 187 lb

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

Pressure to which each is adjusted

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

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