

Rpt. 4.

REPORT ON MACHINERY.

No. 74232

Received at London Office

TUE. 29 MAR. 1921

Date of writing Report 12th March 1921 When handed in at Local Office

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

South Shields

Date, First Survey

3rd March 1920

Last Survey

9th March 1921

Reg. Book.

(Number of Visits 25)

80208 on the

Steel Se.

LOWLAND FIRTH

Master

Built at

South Shields

By whom built

Hepples (1919) Ltd. No. 658

Tons

Gross 350

Net 137

When built

1921

Engines made at

South Shields

By whom made

Hepples (1919) Ltd. No. 658

when made

1921

Boilers made at

Netham

By whom made

Palmer & Co. Ltd. No. 978

when made

1920

Registered Horse Power

Owners

(G. J. Gillie & Co. Mgrs.)

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

62

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Inverted Compound

No. of Cylinders

2

No. of Cranks

2

Dia. of Cylinders

17" x 34"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule 7.5"

Material of screw shaft

as fitted 7.75"

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

Yes

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

Yes

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

2'-11"

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

7.25"

Dia. of Crank pin

7.75"

Size of Crank webs

14" x 4 1/2"

Dia. of thrust shaft under

collars

7.75"

Dia. of screw

8" 10"

Pitch of Screw

10' 6"

No. of Blades

4

State whether moveable

No

Total surface

30 sq

No. of Feed pumps

2

Diameter of ditto

2 3/8"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

2 3/8"

Stroke

12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

2 1/2" x 2 3/4" x 4"

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

In Engine Room

2-2 "dia in"

In Holds, &c. 2-2 "dia in main Hold, 2-2 "dia in stokehold"

No. of Bilge Injections

1

sizes

2 1/4"

Connected to condenser, or to circulating pump

pumps

Is a separate Donkey Suction fitted in Engine room & size

Yes 2" dia

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

None

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

Above

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

Bilge Suctions to Fore Hold & Peak

How are they protected

Wood Cases

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

None

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

See Newcastle Report No. 73820

Total Heating Surface of Boilers

1120

Is Forced Draft fitted

No

No. and Description of Boilers

One S.C. Cyl. Multitubular

Working Pressure

130 lbs

Tested by hydraulic pressure to

260 lbs

Date of test

22-7-20

No. of Certificate

9438

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

200 Spring-loaded

Area of each valve

5.96"

Pressure to which they are adjusted

135 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

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

Size of compensating ring

plate

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

SUPERHEATER. Type

Date of Approval of Plan

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

Tested by Hydraulic Pressure to

Lloyd's Register
W1070-5265 Foundation

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— 2 Connecting rod top end bolts and nuts. 2 bottom end bolts and nuts. 2 main bearing bolts and nuts. 4 Coupling bolts and nuts. 6 piston junk ring studs and nuts. 1 main check valve lid and seat. 1 Auxiliary feed check valve lid and seat. 1 spare feed valve lid & spindle. 1 bilge valve lid and spindle. 6 condenser tubes and 2 do. ferrules. a quantity of assorted iron bolts & nuts and a quantity of assorted Iron.

The foregoing is a correct description.

For HEPPLES (1919) LIMITED,

W. J. Hepples

Manufacturer.

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

1920.

Jan 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Feb 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Mar 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Apr 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, May 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Jun 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Jul 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Aug 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Sep 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Oct 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Nov 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, Dec 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 1921.

Is the approved plan of main boiler forwarded herewith

Yes.

Dates of Examination of principal parts—Cylinders 29.9.20 Slides 23.9.20 Covers 23.9.20 Pistons 6.10.20 Rods 24.9.20
Connecting rods 14.7.20 Crank shaft 12.5.20 Thrust shaft 15.6.20 Tunnel shafts ✓ Screw shaft 6.12.20 Propeller 6.12.20
Stern tube 6.10.20 Steam pipes tested 3.2.21 Engine and boiler seatings 16.12.20 Engines holding down bolts 25.1.21

Completion of pumping arrangements 21.2.21 Boilers fixed 25.1.21 Engines tried under steam 22.2.21

Completion of fitting sea connections 10.12.20 Stern tube 10.12.20 Screw shaft and propeller 16.12.20

Main boiler safety valves adjusted 23.2.21 Thickness of adjusting washers Port & starboard 3/8"

Material of Crank shaft Iron Identification Mark on Do. 6070N Material of Thrust shaft Iron Identification Mark on Do. 5349N.

Material of Tunnel shafts Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 5349N.

Material of Steam Pipes Copper (4 1/2" dia x 9 m.g.) Test pressure 260 lbs. sq. in.

Is an installation fitted for burning oil fuel No 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery and boiler of this vessel

have been built under special survey. The workmanship and materials are sound and good. The boiler and steam pipes have been tested by hydraulic pressure in accordance with the Rules and all satisfactorily fitted on board.

The main and auxiliary machinery were tried under steam and found satisfactory, and the safety valves of the main boiler have been adjusted under steam to the working pressure.

The machinery and boiler throughout are now in good and efficient condition and eligible in our opinion to have the record of L.M.C. 3.21 marked in the Register Book.

It is submitted that

this vessel is eligible for

THE RECORD. + L.M.C. 3.21.

C.L.

Rel
1/4/21

ARR

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,
Special ... £ 11 : 15 : 0 24.3.1921
Donkey Boiler Fee ... £ : : : When received,
Travelling Expenses (if any) £ : : : 16.4.1921

Committee's Minute

TUE. APR. 1921

Assigned

+ L.M.C. 3.21

L.D.

R. E. Arner + W. Hindale.
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation