

Rpt. 4.

REPORT ON MACHINERY.

No. 41594

Received at London Office

Date of writing Report

5th Jan 1922

When handed in at Local Office

8th Jan 1922

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

13th Feb 1920

Last Survey

4th Jan 1922

Reg. Book.

on the

S.S. KYANITE

(Number of Visits, 54)

Gross 643

Net 266

Master

Built at

Glasgow

By whom built

Jarrow & Co. Ltd (1461)

When built

1922

Engines made at

Glasgow

By whom made

Jarrow & Co. Ltd (1461)

when made

1922

Boilers made at

Glasgow

By whom made

Forth Shipbldg & Eng. Co.

when made

1921

Registered Horse Power

Owners

William Robertson

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

120

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

15" 2.5" 4.1"

Length of Stroke

30"

Revs. per minute

100

Dia. of Screw shaft

as per rule 8.5"

Material of screw shaft

Steel

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

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

yes

Length of stern bush

3' 2"

Dia. of Tunnel shaft

as per rule 7.46"

Dia. of Crank shaft journals

as per rule 8.154"

Dia. of Crank pin

9"

Size of Crank webs

12" x 6"

Dia. of thrust shaft under

collars

8" 3/4"

Dia. of screw

10' 0"

Pitch of Screw

11' 6"

No. of Blades

4

State whether moveable

No

Total surface

30 ft

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

15"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3"

Stroke

15"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

Sizes of Pumps

2 6" x 4" x 6"

Ballast 7" x 8" x 8"

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

In Engine Room

2 @ 2 1/2"

In Holds, &c.

2 @ 2 1/2"

No. of Bilge Injections

1

sizes

4 1/2"

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes

1 @ 2 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

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

None

How are they protected

yes

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

yes

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel Glasgow Iron & Steel Co., William Beardmore & Co., Steel Co. of Scotland.

Total Heating Surface of Boilers

2140 ft

Is Forced Draft fitted

No

No. and Description of Boilers

Two Single ended Multi-tubular

Working Pressure

180 lbs.

Tested by hydraulic pressure to

360 lbs./sq. in.

Date of test

8/9/21

No. of Certificate

15893

Can each boiler be worked separately

yes

Area of fire grate in each boiler

33' 4"

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

3.946 sq. in.

Pressure to which they are adjusted

185 lbs./sq. in.

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

4' 0"

Mean dia. of boilers

11' 0"

Length

10' 0"

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

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. 41359

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Working pressure by rules

End plates in steam space:

Pitch of stays to ditto: Sides

Back

Top

Bottom

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Working pressure by rules

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

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Material of Front plates at bottom

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

002062-002070-0152

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IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts and nuts, 2 connecting rod bottom end bolts and nuts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves, quantity of assorted bolts and nuts, of various sizes.

The foregoing is a correct description,

For *James & Co. Ltd. C.C.C. Cotton*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1920 Feb 13 Mar 8 Apr 14 22 27 May 3 5 10 11 17 24 28 Jun 9 21 Jul 13 Aug 4 9 Sep 1 16 Nov 3 18 22 Dec 16 (1921) Jan 12 31
During erection on board vessel --- Feb 8 18 23 28 Mar 24 30 Apr 22 29 Jun 3 Jul 5 Oct 4 6 11 18 27 Nov 14 21 28 30 27 29 Dec 1 2 5 6 8 9 12 (1921) Jan 4
Total No. of visits 54.

Is the approved plan of main boiler forwarded herewith No

“ “ “ donkey “ “ “ ✓

Dates of Examination of principal parts—Cylinders 22/11/20 Slides 22/11/20 Covers 22/11/20 Pistons 22/11/20 Rods 22/11/20
Connecting rods 22/11/20 Crank shaft 4/8/20 Thrust shaft 4/8/20 Tunnel shafts None Screw shaft 4/10/21 Propeller 27/10/21
Stern tube 18/10/21 Steam pipes tested 23/11/21 Engine and boiler seatings 18/10/21 Engines holding down bolts 21/11/21

Completion of pumping arrangements 2/12/21 Boilers fixed 29/11/21 Engines tried under steam 8/12/21

Completion of fitting sea connections 11/10/21 Stern tube 18/10/21 Screw shaft and propeller 27/10/21

Main boiler safety valves adjusted 2/12/21 Thickness of adjusting washers *Loc. Bl. P.V. S.V. S/V. Bl. P.V. S.V.*

Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 1461 4/8/20* Material of Thrust shaft *Steel* Identification Mark on Do. *LLOYDS 1461 4/8/20*

Material of Tunnel shafts *None* Identification Marks on Do. *L* Material of Screw shafts *S* Identification Marks on Do. *LLOYDS 1461 4/10/21 S.V.D.*

Material of Steam Pipes *S.D. Steel* Test pressure *540 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 Yes If so, state name of vessel *H. Essonite*

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been built under Special Survey. The workmanship and materials are good; they have been well fitted on board, tried under steam and found to work satisfactorily.

The machinery of this vessel is eligible in our opinion for the record of L.M.C. 1.22. in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. - 1.22. C.L.

MACHINERY GEAR WRITTEN

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for, 19/1/22
Special ... £ 18 : 0 : 0
Donkey Boiler Fee ... £ : : :
Travelling Expenses (if any) £ : : :
When received, 28/1/22

Committee's Minute GLASGOW 1922

Assigned + LMC 1,22



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