

REPORT ON MACHINERY.

No. 82181

Received at London Office SAT. 7 MAY, 1921

Date of writing Report

19

When handed in at Local Office

22 APR 1921

Port of

Liverpool

No. in Survey held at

Liverpool

Date, First Survey

Feb'y 17th

Last Survey

Apr 20th 1921

Reg. Book.

2294 on the

SS "Saint Andrews" ex "Lofia"

Master

Built at

Rostock

By whom built

Actien Gesellschaft "Keptun"

Tons

Gross 4994

Net 2989

When built

1914

Engines made at

Rostock

By whom made

Actien Gesellschaft "Keptun"

when made

1914

Boilers made at

Rostock

By whom made

Actien Gesellschaft "Keptun"

when made

1914

Registered Horse Power

247

Owners

Korol Ltd.

Port belonging to

London

Nom. Horse Power as per Section 28

220 308

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.

Description of Engines

Triple Expansion Reciprocating

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

23 3/4, 38 3/4, 62"

Length of Stroke

41 3/4"

Revs. per minute

75 to 80

Dia. of Screw shaft

as per rule 13"

Material of

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

Is the propeller boss

Yes

If the liner is in more than one length are the joints burned the length

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

Light

If two

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

Length of stern bush

4' 8"

Dia. of Tunnel shaft

as per rule 11.6"

Dia. of Crank shaft journals

as per rule 12.25"

Dia. of Crank pin

12 3/4"

Size of Crank webs

23 1/2" x 8"

Dia. of thrust shaft under

Collars

12 3/4"

Dia. of screw

15' 9"

Pitch of Screw

14' 3"

No. of Blades

4

State whether moveable

No

Total surface

77.5 sq. ft.

No. of Feed pumps

2

Diameter of ditto

5"

Stroke

9 1/2"

Can one be overhauled while the other is at work

No. of Bilge pumps

2

Diameter of ditto

3 1/2"

Stroke

2' 2"

Can one be overhauled while the other is at work

No. of Donkey Engines

3

Sizes of Pumps

3 1/2" x 10" x 9"

9" x 5" x 9"

7 1/2" x 5" x 9"

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

In Engine Room

2-3"

In Holds, &c.

No. 1 Hold 2-2 1/4"

No. 2 Hold 2-2 1/4"

No. 3 Hold 2-2 1/4"

No. 4 Hold 2-2 1/4"

Lunnet 1-2 1/4"

No. of Bilge Injections

1

sizes

5"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes - 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

None

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

Yes

Are they

Valves or Cocks

Values and Cocks

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

None

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 platform of E.R.

OILERS, &c.—(Letter for record

5)

Manufacturers of Steel

Total Heating Surface of Boilers

4160 sq. ft.

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Single Ended Multitubular

Working Pressure

190 lbs. per sq. in.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

49 sq. ft.

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

10 sq. in.

Pressure to which they are adjusted

193 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

13"

Mean dia. of boilers

13 1/4"

Length

12' 0"

Material of shell plates

Steel

Thickness

1 3/8"

Range of tensile strength

28 tons minimum

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

DR & TR Cap.

Long. seams

DR & TR straps

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

14 3/4"

Leap of plates or width of butt straps

Inner 2 1/4"

Outer 1 1/2"

Per centages of strength of longitudinal joint

rivets 100

plate 92.3

Working pressure of shell by rules

195 lb.

Size of manhole in shell

15 3/4" x 11 1/2"

Size of compensating ring

8 1/2" x 1 3/4"

No. and Description of Furnaces in each boiler

3 Corrugated

Material

Steel

Outside diameter

37 3/4"

Length of plain part

top

bottom

Thickness of plates

crown 9"

bottom

Description of longitudinal joint

Weld

No. of strengthening rings

One

Working pressure of furnace by the rules

200 lb.

Combustion chamber plates: Material

Steel

Thickness: Sides

5"

Back

5"

Top

5"

Bottom

4 3/4"

Pitch of stays to ditto: Sides

7 1/2" x 7 1/2"

Back

7 1/2" x 7 1/2"

Top

8" x 7 1/2"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

224 lb.

Material of stays

Steel

Area at smallest part

1.5 sq. in.

Area supported by each stay

57.6 sq. in.

Working pressure by rules

208 lb.

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

17 1/4" x 16 1/2"

How are stays secured

Double nuts

Working pressure by rules

192 lb.

Material of stays

Steel

Area at smallest part

7.07 sq. in.

Area supported by each stay

278 sq. in.

Working pressure by rules

264 lb.

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

2 3/4"

Greatest pitch of stays

13 3/4" x 7 1/2"

Working pressure of plate by rules

242 lb.

Diameter of tubes

3" cast

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1"

Back

5"

Mean pitch of stays

8 1/2"

Pitch across wide water spaces

1' 2 3/4"

Working pressures by rules

Approved

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

2-8 3/4" x 1 3/4"

Length as per rule

2' 6 1/2"

Distance apart

8"

Number and pitch of stays in each

3-7 1/2"

Working pressure by rules

230 lb.

Steam dome: description of joint to shell

Yes

% of strength of joint

Yes

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

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 crank shaft, 1 propeller shaft, 1 propeller, 1 slide valve spindle, 1 air pump rod, 1 circulating pump rod, 2 connecting rod top and 2 bottom end bolts and nuts, 2 main bearing bolts and nuts, 2 coupling bolts, 1 set each of M.P. and L.P. piston rings, check, feed and bilge pump valves, spare parts for windlass, winch, pump, and other auxiliary machinery, assorted bolts and nuts, assorted iron, 1 main crosshead with brass.

The foregoing is a correct description,

Manufacturer.

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

Feb 17, 18, 21, 25, 28, Mar 2, 3, 7, 8, 15, 24, Apr 6, 20

12

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " " "

Yes

Dates of Examination of principal parts—Cylinders 18/2/21 Slides 18/2/21 Covers 18/2/21 Pistons 18/2/21 Rods 18/2/21

Connecting rods 18/2/21 Crank shaft 18/2/21 Thrust shaft 18/2/21 Tunnel shafts 18/2/21 Screw shaft 7/3/21 Propeller 7/3/21

Stern tube 7/3/21 Steam pipes tested ✓ Engine and boiler seatings 18/2/21 Engines holding down bolts 18/2/21

Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam 20/4/21

Completion of fitting sea connections ✓ Stern tube ✓ Screw shaft and propeller ✓

Main boiler safety valves adjusted 20/4/21 Thickness of adjusting washers Standard B. A. 46 Part B. A. 46 Superheater 8.6

Material of Crank shaft Steel Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓

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

Material of Steam Pipes Steel Test pressure

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 ✓ If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines and Boilers of this vessel are in good condition and securely fitted on board. The Workmanship is good. In my opinion, they are eligible to be classed in the Society's Register Book with records of LMC 4,21 and Tail shaft examined 4,21

The scantlings of the Boilers have been compared with the approved plan. See the Secretary's letter (E) of 4th March 1921

The amount of Entry Fee ... £ : : When applied for, :
Special ... £ : : 19. :
Donkey Boiler Fee ... £ : : When received, :
Travelling Expenses (if any) £ : : 19. :

Committee's Minute

Assigned

LIVERPOOL - 6 MAY 1921

See report attached

B. G. Deford

Engineer Surveyor to Lloyd's Register of Shipping.

TUE 24 OCT. 1922

TUE 11 OCT. 1921

TUE SEP. 12 1922

FRI JUN. 30 1922

FRI NOV. 3 1922

TUE 23 OCT. 1923

FRI NOV. 3 1922

FRI NOV. 3 1922

FRI NOV. 3 1922

2020

Lloyd's Register

Foundation