

REPORT ON MACHINERY.

No. 27811

Received at London Office

TUE. AUG. 11 1914

Date of writing Report

19

When handed in at Local Office

10-8-10 14 Port of

Hull

No. in Survey held at
Reg. Book.

Hull

Date, First Survey

4-3-14

Last Survey

31-7-14 19

on the

Steel screw steamer

Loon

(A/81)

(Number of Visits)

39

Tons

Gross 191

Net 73

Master

Built at

Grove

By whom built

Grove & Rapp Co

When built

1914

Engines made at

Hull

By whom made

Barlis Co Ltd

when made

1914

Boilers made at

Hull

By whom made

Barlis Co Ltd

when made

1914

Registered Horse Power

Owners

Kellall Bros & Beeching

Port belonging to

Nom. Horse Power as per Section 28

55

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

12" - 21" - 33"

Length of Stroke

21"

Revs. per minute

Dia. of Screw shaft

as per rule

7.38

Material of

iron

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

no, two liners

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

painted

Length of stern bush

2'-11 1/2"

Dia. of Tunnel shaft

as per rule

5.74"

Dia. of Crank shaft journals

as per rule

6.03"

Dia. of Crank pin

6 1/2"

Size of Crank webs

4 1/2" x 12 1/2"

Dia. of thrust shaft under

collars

6 1/2"

Dia. of screw

9'-6"

Pitch of Screw

7'-0"

No. of Blades

4

State whether moveable

no

Total surface

32 1/2'

No. of Feed pumps

one

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

Diameter of ditto

2 1/2"

Stroke

10"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

one

Sizes of Pumps

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

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

In Engine Room

One 2"

In Holds, &c.

One 2" to Fore hold, two 2" to

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

2 1/2" injector

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

Hold suction

How are they protected

Wood casing

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

Dates of examination of completion of fitting of Sea Connections

8-6-14

of Stern Tube

16-6-14

Screw shaft and Propeller

16-6-14

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

Phoenix Abt. Hinder Verein Hinder

Total Heating Surface of Boilers

900 1/2

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

160 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

25-6-14

No. of Certificate

3000

Can each boiler be worked separately

yes

Area of fire grate in each boiler

24.5 1/2

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

3.14 1/2

Pressure to which they are adjusted

165 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Mean dia. of boilers

126"

Length

9'-6"

Material of shell plates

steel

Thickness

27/32"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

D.R.A.B. 1

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

5-3/8"

Lap of plates or width of butt straps

11 1/2"

Per centages of strength of longitudinal joint

rivets 87.6

Working pressure of shell by rules

161

Size of manhole in shell

12" x 16"

Size of compensating ring

8" x 27/32"

No. and Description of Furnaces in each boiler

two plain

Material

S

Outside diameter

34"

Length of plain part

top 7 1/2"

bottom 7.0"

Thickness of plates

crown 7 1/2"

bottom 7 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

177

Combustion chamber plates: Material

S

Thickness: Sides

5/8"

Back

2 1/32"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

9" x 8 1/2"

Back

10" x 9"

Top

9" x 7 1/2"

If stays are fitted with nuts or riveted heads

nuts

Material of stays

S

Diameter at smallest part

1.76"

Area supported by each stay

76.5"

Working pressure by rules

164

End plates in steam space:

Material

S

Thickness

7/8"

Pitch of stays

15" x 15"

How are stays secured

S.H. & W.

Working pressure by rules

161

Material of stays

S

Diameter at smallest part

4.22"

Area supported by each stay

225"

Working pressure by rules

195

Material of Front plates at bottom

S

Thickness

7/8"

Material of Lower back plate

S

Thickness

7/8"

Greatest pitch of stays

14" x 9"

Working pressure of plate by rules

191

Diameter of tubes

3"

Pitch of tubes

4 5/8" x 4 3/8"

Material of tube plates

S

Thickness: Front

7/8"

Back

13/16"

Mean pitch of stays

9"

Pitch across wide water spaces

14"

Working pressures by rules

160

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

7 1/4" x 1 1/2"

Length as per rule

27 7/32"

Distance apart

7 1/2"

Number and pitch of stays in each

Two 9"

Working pressure by rules

225

Superheater on Steam chest; how connected to boiler

no

Can the superheater be shut off and the boiler worked

separately

no

Diameter

28 3/4"

Length

30"

Thickness of shell plates

5/8"

Material

S

Description of longitudinal joint

riv

Diam. of rivet

holes

1"

Pitch of rivets

3 1/4"

Working pressure of shell by rules

370

Diameter of flue

yes

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed, bilge, air & circulating pump valves, one main & one donkey check valve, two safety valve springs, one set of donkey pump valves, & a quantity of bolts & nuts & iron of various sizes one spare propeller*

The foregoing is a correct description, *✓*

SHIPBUILDING & ENGINEERING CO. LIMITED

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1914: Mar 4. 9. 16. 27. Apr 3. 6. 20. 22. 24. 30. May 1. 5. 6. 7. 11. 13. 15. 18. 20. 22. 23. 29. Jun 5.
During erection on board vessel - - 8. 10. 12. 15. 16. 17. 18. 22. 25. 30. Jul 6. 18. 22. 28. 29. 31.
Total No. of visits 39

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 13-5-14 Slides 13-5-14 Covers 13-5-14 Pistons 20-5-14 Rods 20-5-14

Connecting rods 22-5-14 Crank shaft 6-5-14 Thrust shaft 6-5-14 Tunnel shafts Screw shaft 15-5-14 Propeller 15-5-14

Stern tube 18-5-14 Steam pipes tested 18.7.14 Engine and boiler seatings 8.6.14 Engines holding down bolts 16.7.14

Completion of pumping arrangements 31.7.14. Boilers fired 18.7.14. Engines tried under steam 22.7.14.

Main boiler safety valves adjusted 22.7.14. Thickness of adjusting washers $PV \frac{15}{32}$ $SV \frac{1}{2}$

Material of Crank shaft *steel* Identification Mark on Do. 1251 FLS Material of Thrust shaft *steel* Identification Mark on Do. 1049 FLS

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts *iron* Identification Marks on Do. 1048 FLS

Material of Steam Pipes *Copper solid drawn* Test pressure 320 lbs. *hydraulic 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 *yes* If so, state name of vessel *Killdeer, Trumpeter etc*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society. The materials & workmanship are good. The Boiler steam pipes have been tested as above. The machinery has been perfectly fitted & secure of breakdown completion was tested under working conditions & found satisfactory. The safety valves have been adjusted as above stated for accumulation which did not exceed 170 lbs.*

In our opinion the vessel is eligible for the record + L.M.C. 7.14.

It is submitted that this vessel is eligible for

THE RECORD. + L.M.C. 7.14

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 8 : 5 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : 6 4

When applied for,

10-8-14

When received,

11-8-14

Thankd Stinson J. G. Mackillop.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. AUG. 14. 1914

Assigned + L.M.C. 7.14