

Rpt. 4.

REPORT ON MACHINERY.

No. 7814

Received at London Office

MON. MAR. 17. 1913

Date of writing Report

19

When handed in at Local Office

18. 3. 12

Port of

MIDDLESBROUGH ON TEES

No. in Survey held at

Middlesbrough

Date, First Survey

11. March 1912

Last Survey

19

Reg. Book.

71 on the

S. S. "Lees Trader"

(Number of Visits 8)

Gross

Tons

Net

Master

Built at Dundee

By whom built

Dundee S. B. & Co. Ltd.

When built 1913

Engines made at

Middlesbrough

By whom made

Richardsons, Westgarth & Co. (396)

when made 1913

Boilers made at

do

By whom made

do

when made 1913

Registered Horse Power

Owners Furness, Withy & Co. Ltd.

Port belonging to West Hartlepool

Nom. Horse Power as per Section 28

171

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

17, 28, 46

Length of Stroke

33

Revs. per minute

Dia. of Screw shaft

as per rule 9.96

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

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

Yes

If two

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

Yes

Length of stern bush 3'-7"

Dia. of Tunnel shaft as per rule

8.67

Dia. of Crank shaft journals as per rule

9.1

Dia. of Crank pin

9 1/4

Size of Crank webs

14x6

Dia. of thrust shaft under

collars

9 1/4

Dia. of screw

12.6

Pitch of Screw

13.6

No. of Feed pumps

2

Diameter of ditto

2 3/4

Stroke

18

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

3

Stroke

18

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

Three

Sizes of Pumps

7 1/2 x 8 1/2 x 8, 5 1/4 x 3 1/2 x 5, 5 1/4 x 3 1/2 x 5

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

In Engine Room

Four 2"

In Holds, &c.

For hold two 2"

After hold

Three 2"

Tunnel well one 2 1/4"

No. of Bilge Injections

1 sizes 4"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

yes 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

Below

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

Forward bilge suctions

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

6-2-13

of Stern Tube

20.2.13

Screw shaft and Propeller

20.2.13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

Top grating

BOILERS, &c.—(Letter for record

(S)

Manufacturers of Steel

John Spencer Horn Ltd.

Total Heating Surface of Boilers

3177 ft²

Is Forced Draft fitted

No

No. and Description of Boilers

One S.E. Cyl. & Mult.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

12.8.12

No. of Certificate

4926

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

81 sq. ft.

No. and Description of Safety Valves to

each boiler

Two direct spring

Area of each valve

9.6

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

16 1/2"

Mean dia. of boilers

17'-0"

Length

11'-6"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

29-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

OK. Lap

long. seams

OK. S. Rivets

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

8 3/4"

Lap of plates or width of butt straps

1'-7 1/2"

Per centages of strength of longitudinal joint

rivets 85.6

plate 85

Working pressure of shell by rules

184 lbs

Size of manhole in shell

16x12"

Size of compensating ring

34 1/2 x 29 x 1 1/2"

No. and Description of Furnaces in each boiler

4 Morrison

Material

Steel

Outside diameter

3'-6 3/4"

Length of plain part

top 17"

bottom 32"

Thickness of plates

crown 17"

Description of longitudinal joint

Welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

191 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Bottom

3/4"

Pitch of stays to ditto: Sides

10 3/8 x 8"

Back

10 x 8 1/2"

Top

11 x 7 3/4"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

190 lbs

Material of stays

Steel

Area at smallest part

2.1

Area supported by each stay

85"

Working pressure by rules

222

End plates in steam space:

Material

Steel

Thickness

1 1/4"

Pitch of stays

21 x 17"

How are stays secured

Material

Steel

Area at smallest part

7.02

Area supported by each stay

357"

Working pressure by rules

204

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

29/32"

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 1/2"

Material of tube plates

Steel

Thickness: Front

1"

Back

3/2"

Mean pitch of stays

11 1/4"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

189 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

9 1/2 x 1 3/4"

Length as per rule

2-8 5/8"

Distance apart

11"

Number and pitch of stays in each

307 3/4"

Working pressure by rules

190 lbs

Superheater or Steam chest; how connected to boiler

None

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Yes

Lloyd's Register

Foundation

W858-D130

