

REPORT ON MACHINERY.

No. 59410

Received at London Office

Date of writing Report

19

When handed in at Local Office

1 - DEC 1910

Port of Newcastle on Tyne

No. in Survey held at
Reg. Book.

Newcastle on Tyne

Date, First Survey

23rd Dec 1909

Last Survey

18th Nov. 1910

(Number of Visits

87)

on the

S. S. Syndic

Master

Built at Blyth

By whom built

Blyth Shipbuilding Co. Ltd.

Gross Tons

2727

Net Tons

1680

When built

1910

Engines made at

Wallend

By whom made

North Eastern Marine Engineering Co. Ltd.

when made

1910

Boilers made at

Wallend

By whom made

Bitto

when made

1910

Registered Horse Power

Owners

Syndic & Co.

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

272

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Inverted triple expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

23", 38", 62"

Length of Stroke

42"

Revs. per minute

70

Dia. of Screw shaft

12.94"

Material of

Iron

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

Yes

Length of stern bush

4' 10"

Dia. of Tunnel shaft

11.46"

Dia. of Crank shaft journals

12.03"

Dia. of Crank pin

12.4"

Size of Crank webs

24.5" x 7.2"

Dia. of thrust shaft under

collars

12.4"

Dia. of screw

16.0"

Pitch of Screw

16.0"

No. of Blades

4

State whether moveable

no

Total surface

81 ft²

No. of Feed pumps

2

Diameter of ditto

3.4"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3.2"

Stroke

24"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

F. 6" x 4" x 6", B. 7.5" x 9" x 10"

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

In Engine Room

4 of 3" after well 3" after hold 2-3" dia. Hold well 1-3" dia.

In Holds, &c.

Fore hold 2-3" diam hold 2-3" dia

No. of Bilge Injections

one

sizes

4"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes - 3.5"

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

Yes

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

Yes

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

Dates of examination of completion of fitting of Sea Connections

5.10.10

of Stern Tube

5.10.10

Screw shaft and Propeller

28.10.10

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

top platform

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Sons

Total Heating Surface of Boilers

4222

Is Forced Draft fitted

no

No. and Description of Boilers

2 S.E. Cylindrical built

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

18.4.10

No. of Certificate

7961

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

53.1 ft²

No. and Description of Safety Valves to

each boiler

2 spring

Area of each valve

7.07 ft²

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

18"

Mean dia. of boilers

14.95"

Length

10.6"

Material of shell plates

steel

Thickness

1.3"

Range of tensile strength

28.5/32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

d & v lap.

long. seams

E & d v.s.

Diameter of rivet holes in long. seams

1.4"

Pitch of rivets

8.5"

Lap of plates or width of butt straps

18.5"

Per centages of strength of longitudinal joint

rivets 87.8

plate 85.7

Working pressure of shell by rules

185.2 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Beighton

Material

steel

Outside diameter

46"

Length of plain part

top

bottom

Thickness of plates

crown 9.1

bottom 11.6

Description of longitudinal joint

weld

No. of strengthening rings

Yes

Working pressure of furnace by the rules

191.54

Combustion chamber plates: Material

steel

Thickness: Sides

23/32

Back

23/32

Top

23/32

Bottom

31/32

Pitch of stays to ditto: Sides

10.5" x 9.5"

Back

10.5" x 9.5"

Top

10.5" x 9.5"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

180.2 lbs

Material of stays

steel

Diameter at smallest part

2.03"

Area supported by each stay

98.43

Working pressure by rules

185.6 lbs

End plates in steam space:

Material

steel

Thickness

1.5"

Pitch of stays

25 x 22

How are stays secured

d & v

Working pressure by rules

184.2 lbs

Material of stays

steel

Diameter at smallest part

9.82"

Area supported by each stay

530

Working pressure by rules

185.76

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

1.5"

Greatest pitch of stays

14.5" x 10.5"

Working pressure of plate by rules

189.54 lbs

Diameter of tubes

3.4"

Pitch of tubes

4.5" x 4.5"

Material of tube plates

steel

Thickness: Front

1"

Back

3/4"

Mean pitch of stays

9 x 8.5"

Pitch across wide water spaces

14.5"

Working pressures by rules

182.1 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8.4" x 1.3"

Length as per rule

30.5"

Distance apart

10.5"

Number and pitch of stays in each

2-9.5"

Working pressure by rules

187 lbs

Superheater or Steam chest; how connected to boiler

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

holes

Manufacturers of Steel

SPARE GEAR. State the articles supplied:— 2 Top end, 2 bottom end, 2 main bearing & 1 set of Coupling bolts, 1 Propeller, 1 set of feed & bilge pump Valves, 1 main & 1 donkey feed Check Valves, 1 Blow Off Valve, 1 set each of Air, Circulating, & Ballast donkey, Valves, Bolts & Nuts assorted and iron of sizes

Manufacturer.

Is the approved plan of main boiler forwarded herewith Yes

" " " *donkey* " " *2. 2. 1.*

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

It is submitted that
this vessel is eligible for
THE RECORD + LMC 11.10

When applied for,

Assigned

R. W. Coomber. & J. S. Salter.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

10
MACHINERY CERTIFICATE
WRITTEN.

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