

REPORT ON MACHINERY.

No. 21608

Port of

Sunderland

Received at London Office

FRI. 11 DEC 1903

No. in Survey held at

Sunderland

Date, first Survey

22 Sep '03

Last Survey

2 Decr 1903

Reg. Book.

on the

S. S. "Wentbridge"

(Number of Visits)

Tons

Gross 2732

Net 1753

When built

1903

Master

W. H. Bulmer

Built at

Sunderland

By whom built

J. Blumer & Co.

Engines made at

Sunderland

By whom made

J. Dickinson & Sons Ltd

When made

1903

Boilers made at

Sunderland

By whom made

J. Dickinson & Sons Ltd

When made

1903

Registered Horse Power

Owners

J. Merryweather & Co.

Port belonging to

West Hartlepool

Nom. Horse Power as per Section 28

268

Is Refrigerating Machinery fitted

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Tri-compound

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

23.88.63

Length of Stroke

42

Revs. per minute

40

Dia. of Screw shaft

as per rule 13.7

Material of

W.S.

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

—

If two

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

—

Length of stern bush

4'-6"

Dia. of Tunnel shaft

as per rule 11.497

as fitted 11.2

Dia. of Crank shaft journals

as per rule 12.07

as fitted 12.18

Dia. of Crank pin

12 1/8

Size of Crank webs

Patent

Dia. of thrust shaft under

collars

12 1/8

Dia. of screw

16'-0"

Pitch of screw

16'-6"

No. of blades

4

State whether moveable

No

No. of Feed pumps

2

Diameter of ditto

3 1/4

Stroke

21

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4 1/4

Stroke

21

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

Duplex. 5 1/4 x 3 1/2 x 5

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

In Engine Room

2 Port 3", 2 Starboard 3"

In Holds, &c.

2 of 3" in each hold

No. of bilge injections

1

size

4"

Connected to condenser, or to circulating pump

C.P.

Is a separate donkey suction fitted in Engine room & size

Yes 4"

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

—

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

New vessel

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)

Total Heating Surface of Boilers

3974 ft

Is forced draft fitted

No

No. and Description of Boilers

2 Single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

19-11-03

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

55 1/2 ft

No. and Description of safety valves to

each boiler

2 Spring

Area of each valve

8.3 sq"

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers

15'-0"

Length

10'-6"

Material of shell plates

S

Thickness

1 1/32

Range of tensile strength

27/32

Are they welded or flanged

No

Descrip. of riveting: cir. seams

D. R.

long. seams

V. R. D. B. S.

Diameter of rivet holes in long. seams

1 7/16

Pitch of rivets

8 5/16

Lap of plates or width of butt straps

1'-7 1/4"

Per centages of strength of longitudinal joint

rivets 92.4

plate 85.3

Working pressure of shell by rules

180 lbs

Size of manhole in shell

16 x 12

Size of compensating ring

8 5/8 x 1 1/32

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

3'-6"

Length of plain part

top 6-6

Thickness of plates

crown 3/4 x 1/64

Description of longitudinal joint

Welded

No. of strengthening rings

None

Working pressure of furnace by the rules

181

Combustion chamber plates: Material

S

Thickness: Sides

1/16

Back

1/16

Top

1/16

Bottom

Pitch of stays to ditto: Sides

10 x 9

Back

10 x 9

Top

10 x 9

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

180

Material of stays

S

Diameter at smallest part

1 5/8

Area supported by each stay

90

Working pressure by rules

186

End plates in steam space:

Material

S

Thickness

1 3/32

Pitch of stays

18 1/4 x 16 1/2

How are stays secured

Nuts

Working pressure by rules

187

Material of stays

S

Diameter at smallest part

5 5/8

Area supported by each stay

302

Working pressure by rules

186

Material of Front plates at bottom

S

Thickness

7/8

Material of Lower back plate

S

Thickness

7/8

Greatest pitch of stays

13 3/4

Working pressure of plate by rules

183

Diameter of tubes

3 1/4

Pitch of tubes

4 1/2

Material of tube plates

S

Thickness: Front

7/8

Back

7/8

Mean pitch of stays

9

Pitch across wide water spaces

15 1/4

Working pressures by rules

218 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

10 x 1 x 2

Length as per rule

2-6 1/16

Distance apart

9

Working pressure by rules

187 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

—

holes

—

Pitch of rivets

—

Working pressure of shell by rules

—

Diameter of flue

—

Material of flue plates

DONKEY BOILER— No. 1 Description Multitubular Horizontal
 Made at Sunderland By whom made J. Dickinson & Sons When made 1903 Where fixed On Deck
 Working pressure 80 tested by hydraulic pressure to 160 No. of Certificate 2208 Fire grate area 20 sq Description of safety valves Spring
 No. of safety valves 2 Area of each 7.07 Pressure to which they are adjusted 80 lbs If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No Dia. of donkey boiler 9'-0" Length 8'-6" Material of shell plates S Thickness 1/2 Range of tensile strength 25 1/2 Descrip. of riveting long. seams J. R. L. Dia. of rivet holes 13/16 Whether punched or drilled Drilled Pitch of rivets 3 1/16
 Lap of plating 5 1/16 Per centage of strength of joint 77.2 Rivets 47.2 Thickness of shell end plates 47/64 Radius of do. Pitch No. of Stays to do. 16 1/2 x 19 1/4
 Dia. of stays 2' 4 1/8 Diameter of furnace Top 2'-8" Bottom Thickness of furnace plates 13/32 Thickness of furnace crown plates 1/2 Description of joint Weld Thickness of furnace crown plates 1/2 Stayed by Yes Working pressure of shell by rules 91 2/3
 Working pressure of furnace by rules 86 2/3 Diameter of tubes 3 1/4 Thickness of tube plates 47/64 6 9/16 Thickness of stay tubes 1/4

SPARE GEAR. State the articles supplied:— Top & bottom end connecting rod bolts & nuts, 2 main bearing bolts & nuts; 1 set coupling bolts, feed & bilge pump valves; propeller, bolts & nuts assorted.

The foregoing is a correct description,

J. Dickinson & Sons, Limited,

Manufacturer.

Dates { During progress of work in shops - } Director 1903 - Sep 22. 28 Oct 1. 9. 16. 26. Nov. 2. 5. 9. 16. 17. 18. 20
 { During erection on board vessel - } 23. 25. 28. 30 Dec 1. 2
 while building { Total No. of } 19 Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " No

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been built under Special Survey. Materials & workmanship good. Boilers & steam pipes tested by hydraulic pressure to double the working pressure. The engines worked well. The safety valves of the boilers adjusted as above.
The vessel is eligible in my opinion to have the notation in the Register Book of + L.M.C. 12.03

It is submitted that
 this vessel is eligible for
 THE RECORD L.M.C 12.03.

11.12.03
11.12.03

The amount of Entry Fee. £ 2 : : When applied for, 7.12.03
 Special .. £ 33 : 8 : :
 Donkey Boiler Fee .. £ : : : When received 8.12.03
 Travelling Expenses (if any) £ : : :

Committee's Minute

Assigned

TUES. 15 DEC 1903

+ L.M.C 12.03

MACHINERY CERTIFICATE
 WRITTEN.

Pat. Salmon,
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



© 2021

Lloyd's Register
 Foundation