

REPORT ON MACHINERY.

No. 13044.

Port of WEST HARTLEPOOL.

NFD. 29 AUG 1806

Received at London Office

19

No. in Survey held at

HARTLEPOOL.

Date, first Survey 22nd Feb. 1906. Last Survey 14th August, 1906

Reg. Book.

(Number of Visits 31)

b. sup. on the

S. L. Dipton

Master J. V. Day

Built at

Hartlepool

By whom built

Turner, W. Hay & Co. Ltd.

When built 1906

Engines made at

Hartlepool

By whom made

Richardson Westgarth & Co. Ltd.

when made 1906

Boilers made at

By whom made

when made 1906

Registered Horse Power

Owners Peart & Co. Ltd. (Buckingham Co.)

Port belonging to Newcastle-on-Tyne

Nom. Horse Power as per Section 28

317.15

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

24-39-66

Length of Stroke

45

Revs. per minute

60

Dia. of Screw shaft

as per rule

14 1/2

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

No

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

Length of stern bush

4'-10"

Dia. of Tunnel shaft

as per rule

12.15

Dia. of Crank shaft journals

as per rule

12.65

Dia. of Crank pin

13

Size of Crank webs

8x2'-1"

Dia. of thrust shaft under

collars

13"

Dia. of screw

16.9"

Pitch of Screw

16.6"

No. of Blades

4

State whether moveable

No

Total surface

88.9 sq

No. of Feed pumps

2

Diameter of ditto

3"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 3/4"

Stroke

27"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

6x4x6-9 8 1/2-4"

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

In Engine Room (4) 3 1/2" Dia

In Engine Room

(4) 3 1/2" Dia

In Holds, &c.

Fore Hold (2) 3 1/2"

No. 2 Hold (2) 3 1/2"

No. of Bilge Injections

1

sizes

5"

Connected to condenser, or to circulating pump

Cir

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

Yes

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

Yes

Are they Valves or Cocks

Leath.

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

Yes

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

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

13/7/06

Stern Tube

29/6/06

Screw shaft and Propeller

13/7/06

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Lop Platform

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Clydebridge Steel Works.

Total Heating Surface of Boilers

4891

Is Forced Draft fitted

No

No. and Description of Boilers

2. Lique ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

20/6/06

No. of Certificate

3062

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

52.5 sq

No. and Description of Safety Valves to

each boiler

2 Spring

Area of each valve

7.06 sq

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

15' 10"

Mean dia. of boilers

16' 0"

Length

10' 9"

Material of shell plates

S

Thickness

19/32"

Range of tensile strength

28.5/32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

DR

long. seams

TRDBS

Diameter of rivet holes in long. seams

19/32

Pitch of rivets

8 1/8"

Lap of plates or width of butt straps

18 1/4"

Per centages of strength of longitudinal joint

rivets

86.8

Working pressure of shell by rules

181.5 lbs

Size of manhole in shell

16 1/2 x 13"

Size of compensating ring

19/32"

No. and Description of Furnaces in each boiler

3 No. 1

Material

S

Outside diameter

50 3/4"

Length of plain part

top

9"

Thickness of plates

crown

14/32

Description of longitudinal joint

welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

180 lbs

Combustion chamber plates: Material

S

Thickness: Sides

19/32

Back

19/32

Top

19/32

Bottom

14/16

Pitch of stays to ditto: Sides

8 1/2 x 7 1/2

Back

8 1/2 x 8

Top

8 1/2 x 7 1/4

stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

180 lbs

End plates in steam space:

Material of stays

S

Diameter at smallest part

1 3/8"

Area supported by each stay

8 1/4 x 8

Working pressure by rules

180 lbs

Material of stays

S

Material

S

Thickness

1"

Pitch of stays

16 1/4 x 16 1/8

How are stays secured

DNW

Working pressure by rules

180 lbs

Material of stays

S

Diameter at smallest part

2 1/2"

Area supported by each stay

16 1/4 x 16 1/8

Working pressure by rules

180 lbs

Material of Front plates at bottom

S

Thickness

14/16

Material of Lower back plate

S

Thickness

13/16

Greatest pitch of stays

13"

Working pressure of plate by rules

194 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2"

Material of tube plates

S

Thickness: Front

15/16

Back

12/16

Mean pitch of stays

9"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

188 lbs

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

8 1/2 x 1 3/4

Length as per rule

32"

Working pressure by rules

187 lbs

Superheater or Steam chest; how connected to boiler

Yes

Can the superheater be shut off and the boiler worked

separately

Yes

Description of longitudinal joint

S

Diam. of rivet

holes

Pitch of rivets

S

Working pressure of shell by rules

S

Diameter of flue

S

Material of flue plates

S

Thickness

S

If stiffened with rings

Yes

Distance between rings

S

Working pressure by rules

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety
 Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment
 If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length
 Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams
 Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint
 Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays
 Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint
 Working pressure of furnace by rules Thickness of furnace crown plates Stayed by
 Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied:— 1 spare propeller 1 spare propeller shaft
 2 Main check valves 2 donkey ditto 1 set HP Packing rings 1 set S.P. ditto 2 HP piston & valve rings & spare gear as per rule requirements

The foregoing is a correct description,
 RICHARDSONS, WESTGARTH & CO. LIMITED
 181 Regent St. Manufacturer.

Dates of Survey while building
 During progress of work in shops— 1906 Mar. 22 Apr 3. 23. 24. May 3. 9. 10. 16. 18. 21. 24. 25. 29. 30. 31. June 1. 4. 15. 19. 20. 27.
 During erection on board vessel— 29. July. 2. 4. 5. 6. 11. 13. 16. 18. Aug. 14.
 Total No. of visits 31

Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Cylinders 16/5/06 Slides 25/5/06 Covers 30/5/06 Pistons 30/5/06 Rods 4/7/06
 Connecting rods 4/7/06 Crank shaft 27/6/06 Thrust shaft 18/7/06 Tunnel shafts 10/5/06 Screw shaft 20/5/06 Propeller 20/6/06
 Stern tube 29/6/06 Steam pipes tested 13/7/06 Engine and boiler seatings 13/7/06 Engines holding down bolts 13/7/06
 Completion of pumping arrangements 13/7/06 Boilers fixed 13/7/06 Engines tried under steam 13/7/06
 Main boiler safety valves adjusted 14/7/06 Thickness of adjusting washers SB 58 3/8 PV 3/8 1/32 PB 58 13/16
 Material of Crank shaft S Identification Mark on Do. 4446 Material of Thrust shaft S Identification Mark on Do. 4446
 Material of Tunnel shafts S Identification Marks on Do. 4446 Material of Screw shafts S Identification Marks on Do. 4446
 Material of Steam Pipes W Iron Test pressure 500 lbs.

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

4417 Area 12.3 tons total 28.0 tons H. 3.5 long.

The Engines & Boilers of this vessel have been constructed under special survey & the materials & workmanship are sound & good. The engines have been tried under steam & the safety valves of the Main & Donkey boilers have been adjusted under steam to the working pressure.

The Machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 8.06 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 8.06

The amount of Entry Fee... £ 3 :
 Special ... £ 25. 17 :
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ :
 When applied for, 24. 8. 06
 When received, 28. 8. 06

W. H. S. & S. Stanton
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 31 AUG 1906

Assigned

MACHINERY CERTIFICATE
 WRITTEN.



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 Foundation