

REPORT ON MACHINERY.

No. *KQ.VV.VV.*

Port of

Newcastle-on-Tyne

SAT. 7 OCT 1905

Received at London Office

19

No. in Survey held at
Reg. Book.*South Shields*Date, first Survey *July 6th 1905*Last Survey *2nd October 1905*

(Number of Visits)

on the

S. S. JAVA

Master

Built at

Selly

By whom built

Cochrane & Sons

Tons

Gross *124*Net *6*

When built

1905

Engines made at

South Shields

By whom made

G. J. Grey

when made

1905

Boilers made at

South Shields

By whom made

G. J. Eltringham & Co.

when made

1905

Registered Horse Power

Owners

W. W. Atkins

Port belonging to

London

Nom. Horse Power as per Section 28

63-2

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

13-21-34

Length of Stroke

24

Revs. per minute

104

Dia. of Screw shaft

*as per rule**7 1/2*

Material of

Iron

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

no

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

Painted

Length of stern bush

2-7"

Dia. of Tunnel shaft

*as per rule**6-23*

Dia. of Crank shaft journals

*as per rule**6-54*

Dia. of Crank pin

6 5/8

Size of Crank webs

4 3/4

Dia. of thrust shaft under

collars

collars

6 5/8

Dia. of screw

8-9

Pitch of screw

11-6"

No. of blades

4

State whether moveable

no

Total surface

28 sq

No. of Feed pumps

1

Diameter of ditto

2 1/2

Stroke

13

Can one be overhauled while the other is at work

—

No. of Bilge pumps

1

Diameter of ditto

3

Stroke

13

Can one be overhauled while the other is at work

—

No. of Donkey Engines

2

Sizes of Pumps

5 1/4 x 3 1/2 x 5

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

In Engine Room

one of 2"

In Holds, &c.

one of 2" + one of 2" aft

No. of bilge injections

1

sizes

2 1/2

Connected to condenser, or to circulating pump

Pumps

a separate donkey suction fitted in Engine room & size

yes 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

—

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

Main Steam Pipe

How are they protected

Iron 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

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

now and

Is the screw shaft tunnel watertight

Machinery aft

Is it fitted with a watertight door

—

worked from

—

BOILERS, &c.—

(Letter for record

S)

Total Heating Surface of Boilers

1050 sq

Is forced draft fitted

no

No. and Description of Boilers

1 Single ended

Working Pressure

160

Tested by hydraulic pressure to

*320*Date of test *24.8.05* Can each boiler be worked separately*—*

Area of fire grate in each boiler

38 sq

No. and Description of safety valves to

each boiler *7 two Spring Loaded*

Area of each valve

4.9

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

11-3 1/2

Length

9.6

Material of shell plates

Steel

Thickness

29/32

Range of tensile strength

28/32

Are they welded or flanged

no

Descrip. of riveting: cir. seams

lap D.R.

long. seams

D.D.S

Diameter of rivet holes in long. seams

1 1/4"

Pitch of rivets

7 1/4"

Lap of plates or width of butt straps

12 1/2"

Per centages of strength of longitudinal joint

83

Working pressure of shell by rules

165 lbs

Size of manhole in shell

12 x 16"

Size of compensating ring

M. N. H. King

No. and Description of Furnaces in each boiler

2 Plain Furnaces

Material

Steel

Outside diameter

40 3/4

Length of plain part

*top 6"**bottom 5-10"*

Thickness of plates

*top 1 1/4"**bottom 1 1/4"*

Description of longitudinal joint

Welded

No. of strengthening rings

1/2 hoops

Working pressure of furnace by the rules

164

Combustion chamber plates: Material

Steel

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

Pitch of stays to ditto: Sides

8 1/2 x 8 1/2

Back

8 1/2 x 8 1/2

Top

9 x 8

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

161

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

8 1/2 x 8 1/2

Working pressure by rules

177

End plates in steam space:

Material

Steel

Thickness

29/32

Pitch of stays

15 1/4 x 15 1/4

How are stays secured

D. N. V. W.

Working pressure by rules

161

Material of stays

Steel

Diameter at smallest part

2 5/16"

Area supported by each stay

15 1/2"

Working pressure by rules

175

Material of Front plates at bottom

Steel

Thickness

7/8

Material of Lower back plate

Steel

Thickness

27/32

Greatest pitch of stays

13 1/2"

Working pressure of plate by rules

169

Diameter of tubes

3"

Pitch of tubes

4 1/4"

Material of tube plates

Steel

Thickness: Front

29/32

Back

3/4"

Mean pitch of stays

8 1/2 x 11 3/4

Pitch across wide water spaces

14"

Working pressures by rules

156

Girders to Chamber tops: Material

Steel

Depth and

*thickness**5 3/4"*

Length as per rule

27 1/2

Distance apart

8"

Working pressure by rules

160

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

Pitch of

DONKEY BOILER—

No. Description
 Made at By whom made When made Where fixed
 Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
 No. of safety valves Area of each Pressure to which they are adjusted 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 Rivets 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
 Thickness of furnace crown plates Stayed by Working pressure of shell by rules
 Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— 2 Top end 2 bottom end, 2 main bearing bolts
 + nuts, 3 Piston bolts, 1 set coupling bolts, 1 set piston valves
 Iron & bolts assorted

The foregoing is a correct description, *Mrs. J. T. Hay*
 Manufacturer. of Engines.

Mrs. J. Ellingham & Co.
 Manufacturers of Boilers

Dates During progress of work in shops— 1905. July 6. 18. August 11. September 13. 18. 19. 22. 26. 28. October 2nd.
 of Survey During erection on board vessel—
 while building Total No. of visits 11.

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " "

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

The machinery of this vessel has been built under Special Survey & in my opinion is eligible for record F.L.M.C. 10.05

It is submitted that
 this vessel is eligible for
 THE RECORD F.L.M.C. 10.05

Publ.
7.10.05

Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee. £ 1 : 0 : 0 When applied for, *4.10.05*
 Special .. £ 9 : 9 : 0
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : :
 When received, *10.10.05*

G. A. Dryden Joyce
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

10.10.05

Assigned

L.M.C. 10.05

MACHINERY CERTIFICATE
 WRITTEN.



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