

REPORT ON MACHINERY.

No. 17965

TUES. 5 JUN 1906

Port of

Hull

Received at London Office

19

No. in Survey held at

Hull

Date, first Survey

Dec 9/05

Last Survey

30th May

1906

Reg. Book.

on the

Steel. S. K. "North King"

(Number of Visits 25)

Master

Built at

Hull

By whom built

Earle's S. & E. Co. Ltd

Tons

Gross 271

Net 96

When built

1906

Engines made at

Hull

By whom made

Earle's S. & E. Co. Ltd

when made

1906

Boilers made at

do

By whom made

do

when made

1906

Registered Horse Power

Owners

J. A. Robins & Co. Ltd

Port belonging to

Hull

Nom. Horse Power as per Section 28

77.6

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 12 $\frac{1}{4}$ ", 22", 36" Length of Stroke 24" Revs. per minute 110

Dia. of Screw shaft as per rule 7.45

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

✓

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 2'-10 $\frac{1}{2}$ "

Dia. of Propeller shaft as per rule 6.7

as fitted 7 $\frac{3}{8}$ "

Dia. of Crank shaft journals as per rule 7"

as fitted 7 $\frac{1}{2}$ "Dia. of Crank pin 7 $\frac{1}{2}$ "Size of Crank webs 14" x 4 $\frac{1}{2}$ " Dia. of thrust shaft undercollars 7 $\frac{1}{2}$ "

Dia. of screw 9'-0"

Pitch of Screw 11'-6"

No. of Blades 4

State whether moveable

No

Total surface 27 sq. ft.

No. of Feed pumps One

Diameter of ditto 3"

Stroke 12"

Can one be overhauled while the other is at work

✓

No. of Bilge pumps One

Diameter of ditto 3"

Stroke 12"

Can one be overhauled while the other is at work

✓

No. of Donkey Engines Two

Sizes of Pumps 6" x 3" x 6" 6" x 6" x 6"

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

In Engine Room 3 - 2" & one 3"

In Holds, &c. One each 2" to each slush

well, yoke hold, & suction from Eng. Room bilge & slush wells

No. of Bilge Injections 1

sizes 3 $\frac{1}{2}$ "

Connected to condenser, or to circulating pump

Cond.

Is a separate Donkey Suction fitted in Engine room & size

Yes 3

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

Cold suction

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

5.4.06

of Stern Tube

5.4.06

Screw shaft and Propeller

5.4.06

Is the Screw Shaft Tunnel watertight

None

Is it fitted with a watertight door

✓

worked from

✓

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel

Hoerder & Co., Germany

Total Heating Surface of Boilers 1260 sq. ft. Forced Draft fitted

No

No. and Description of Boilers

One S. & E. byl. Mult.

Working Pressure 200 lbs

Tested by hydraulic pressure to 400 lbs

Date of test 16.5.06

No. of Certificate 1443

Can each boiler be worked separately

✓

Area of fire grate in each boiler 44 sq. ft.

No. and Description of Safety Valves to

each boiler Two Spring

Area of each valve 4.9 sq. in.

Pressure to which they are adjusted

204 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7'

Int.

Mean dia. of boilers

13'-0"

Length

10'-6"

Material of shell plates

Steel

Thickness 1 $\frac{3}{16}$ "

Range of tensile strength 28-32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

BR. Lap

long. seams

5 BR. 5 knots

Diameter of rivet holes in long. seams

1 $\frac{3}{16}$ "

Pitch of rivets

7 $\frac{1}{16}$ "

Lap of plates or width of butt straps

17 $\frac{1}{2}$ "

Per centages of strength of longitudinal joint

rivets 90

plate 84.5

Working pressure of shell by rules

202 lbs

Size of manhole in shell

16" x 12"

Size of compensating ring

3'-4" x 2'-6" x 1 $\frac{3}{16}$ "

No. and Description of Furnaces in each boiler

Three plain

Material

Steel

Outside diameter 3'-1"

Length of plain part

top 6'-2"

bottom 5'-8"

Thickness of plates

crown 3 $\frac{1}{4}$ "bottom 3 $\frac{1}{4}$ "

Description of longitudinal joint

Welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

204 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

1 $\frac{1}{16}$ "Back 5 $\frac{1}{8}$ "Top 1 $\frac{1}{16}$ "Bottom 1 $\frac{1}{16}$ "

Pitch of stays to ditto: Sides

9 $\frac{1}{2}$ " x 8"Back 8" x 7 $\frac{1}{2}$ "Top 8" x 7 $\frac{1}{2}$ "

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

212 lbs

Material of stays

Steel

Diameter at smallest part

1 $\frac{5}{8}$ "

Area supported by each stay

76"

Working pressure by rules

245 lbs

End plates in steam space:

Material

Steel

Thickness

1 $\frac{3}{16}$ "

Pitch of stays

7 $\frac{3}{4}$ " x 15 $\frac{1}{4}$ "

How are stays secured

Nuts & screws into end plates

Working pressure by rules

243 lbs

Material of stays

Steel

Diameter at smallest part

2 $\frac{13}{16}$ "

Area supported by each stay

270"

Working pressure by rules

230 lbs

Material of Front plates at bottom

Steel

Thickness

1"

Material of Lower back plate

Steel

Thickness

1"

Greatest pitch of stays

14 $\frac{1}{2}$ "

Working pressure of plate by rules

200 lbs

Diameter of tubes

3 $\frac{1}{4}$ "

Pitch of tubes

4 $\frac{3}{4}$ " x 4 $\frac{3}{4}$ "

Material of tube plates

Steel

Thickness

1"

Back

2 $\frac{1}{8}$ "

Mean pitch of stays

9 $\frac{1}{2}$ "

Pitch across wide water spaces

14"

Working pressures by rules

210 lbs

Girders to Chamber tops: Material

Steel

Thickness of girder at centre

9 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ "

Length as per rule

2'-11"

Distance apart

7 $\frac{5}{8}$ "

Number and pitch of stays in each

3 @ 8"

Working pressure by rules

216 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

✓

Thickness

✓

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

✓

Lloyd's Register

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 Rivets
 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:—Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air, circulation feed bilge pump valves, and a quantity of assorted bolts nuts etc.

The foregoing is a correct description,

FOR EARLE'S

Manufacturer.

SHIPBUILDING & ENGINEERING CO. LIMITED

F. J. Palethorpe SECRETARY
 Dates of Survey while building
 During progress of work in shops - 1905: Dec 9. 19 1906: Jan 20 Feb 7. 13. 22. Mar 5. 9. 16. 22. 29. 30 Apr. 5. 24.
 During erection on board vessel - May 3. 8. 10. 15. 18. 19. 21. 23. 24. 25. 30.
 Total No. of visits 25

Is the approved plan of main boiler forwarded herewith ☒ yes
 " " " donkey " " " ☒

Dates of Examination of principal parts—Cylinders 19/12/05 Slides Feb 7/06 Covers 7/2/06 Pistons 22/2/06 Rods 22/2/06
 Connecting rods 22/2/06 Crank shaft 20/1/06 Thrust shaft 20/1/06 Tunnel shafts Screw shaft 20/1/06 Propeller 9/3/06
 Stern tube 9/3/06 Steam pipes tested 22 5 06 Engine and boiler seatings 5 4 06 Engines holding down bolts 15 5 06
 Completion of pumping arrangements 29 5 06 Boilers fixed 20 5 06 Engines tried under steam 30 5 06
 Main boiler safety valves adjusted 24 5 06 Thickness of adjusting washers Port 5/16" Starboard 3/8"
 Material of Crank shaft Iron Identification Mark on Do. S.A.H. 445 Material of Thrust shaft Steel Identification Mark on Do. LLOYDS
 Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. S.A.H. 46
 Material of Steam Pipes Solid drawn Copper Test pressure 400 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boiler of this vessel have been inspected during construction in accordance with the Society's Rules. The material & workmanship are good. The boiler tested by hydraulic pressure, and with the engines placed on board, & tested under steam they are now in good order & safe working condition, and respectfully submit as being eligible in our opinion to be classed with the notation of $\frac{1}{2}$ L.M.C. 5.06 in the Register Book.

Attached herewith, are Long's Rpts. on crank, thrust, screw shaft letter from owners re feed pumps, and advice notes, for furnace boiler plates, engine steel castings.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 5.06

The amount of Entry Fee. £ 1 : . : . When applied for.
 Special £ 11 : 14 : . 1906
 Donkey Boiler Fee £ : . : . When received.
 Travelling Expenses (if any) £ : . : . 1906

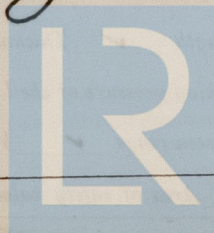
Committee's Minute

WED. 6 JUN 1906

Assigned

+ L.M.C. 5.06

MACHINERY CERTIFICATE
 WRITTEN.



© 2021

Lloyd's Register
 Foundation