

REPORT ON MACHINERY.

No. 58841

Port of *Newcastle-on-Tyne*Received at London Office *28 JUL 1910*No. in Survey held at *South Shields*Date, first Survey *16 July 1910* Last Survey *23rd July 1910*

Reg. Book.

on the

S.S. Indian Prince(Number of Plates *26*)

Master

Built at

So. Shields

By whom built

*J. Readhead & Sons Ltd*Tons *2846*Net *1775*When built *1910*

Engines made at

South Shields

By whom made

*J. Readhead & Sons Ltd*when made *1910*

Boilers made at

South Shields

By whom made

*J. Readhead & Sons Ltd*when made *1910*

Registered Horse Power

Owners

Prince Line Ltd.

Port belonging to

Newcastle

Nom. Horse Power as per Section 28

389

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

25"-42"-69"

Length of Stroke

45"

Revs. per minute

Dia. of Screw shaft

13.21

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

4'-11"

Dia. of Tunnel shaft

as per rule 12.4

Dia. of Crank shaft journals

as per rule 13.06

Dia. of Crank pin

14"

Size of Crank webs

9'x18"

Dia. of thrust shaft under

collars

collars

14 1/2"

Dia. of screw

17'-0"

Pitch of Screw

16'-6"-18'-6"

No. of Blades

4

State whether moveable

No

No. of Feed pumps

2

Diameter of ditto

3'-2"

Stroke

33"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4'-2"

Stroke

33"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

4

Sizes of Pumps

7 1/2 x 10 1/4 x 10" + 7 1/2 x 5 x 10"

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

In Engine Room Port 3" dia. Centre 3" dia. Starboard 3" dia. In Holds, &c. 2 in each hold, 1 in

Starboard wing

3" dia. & 1 Port wing 3" dia. Tunnel Wall 2 1/2" dia.

No. of Bilge Injections

1

sizes

5'-2"

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

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

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

Dates of examination of completion of fitting of Sea Connections

25-5-10

of Stern Tube

13-5-10

Screw shaft and Propeller

7-6-10

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

*Top Platform*BOILERS, &c.—(Letter for record *Y*)

Manufacturers of Steel

J. Spencer Ltd

Total Heating Surface of Boilers

5268

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 S.E. Cyl Mult

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

26-5-1910

No. of Certificate

7978

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

62.53

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Smallest distance between boilers or uptakes and bunkers or woodwork

2'-0"

Mean dia. of boilers

15'-4 3/8"

Length

11'-8 3/4"

Material of shell plates

Steel

Thickness

1 3/8"

Range of tensile strength

Ton 28 3/4

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

d.p. lap

long. seams

d.p. d.b.a.

Diameter of rivet holes in long. seams

1 7/16"

Pitch of rivets

4 7/16"

Lap of plates or width of butt straps

1'-9 1/8"

Per centages of strength of longitudinal joint

89%

Working pressure of shell by rules

203 lbs

Size of manhole in shell

*16" x 12" in back**Size of compensating ring**Flanged*

No. and Description of Furnaces in each boiler

3 Morrison

Material

Steel

Outside diameter

3'-11 3/4"

Length of plain part

top 14"

Thickness of plates

bottom 32"

Description of longitudinal joint

✓

No. of strengthening rings

✓

Working pressure of furnace by the rules

197.9

Combustion chamber plates: Material

Steel

Thickness: Sides

13/16"

Back

13/16"

Top

13/16"

Bottom

1"

Working pressure by rules

195 lbs

Pitch of stays to ditto: Sides

11 1/8 x 10 1/2"

Back

11 1/8 x 10 1/2"

Top

11 1/4 x 9 3/4"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

198 lbs

Material of stays

Iron

Diameter at smallest part

3.09

Area supported by each stay

116.80

Working pressure by rules

198 lbs

End plates in steam space:

Material

Steel

Thickness

1 3/8"

Pitch of stays

22 5/8 x 21 5/8"

How are stays secured

D.N. & W.

Working pressure by rules

182 lbs

Material of stays

Steel

Diameter at smallest part

8.48

Area supported by each stay

467.0

Working pressure by rules

188 lbs

Material of Front plates at bottom

Steel

Thickness

1 5/8"

Greatest pitch of stays

14 1/2"

Working pressure of plate by rules

193

Diameter of tubes

2 1/2"

Pitch of tubes

3 1/2"

Material of tube plates

Steel

Thickness: Front

15/16"

Back

7/8"

Mean pitch of stays

9 9/16"

Pitch across wide water spaces

1'-1 1/2"

Working pressures by rules

198 lbs

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8" x 2"

Length as per rule

30 9/16

Distance apart

11 3/4"

Number and pitch of stays in each

2" x 9 3/4"

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

Thickness

✓

If stiffened with rings

✓

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 _____ Plates _____

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:— 2 Top End, 2 Bottom End, & 2 Main Bearing Bolts
Nuts, 1 set coupling bolts, 1 set of feed & bilge pump valves, 1 propeller
shaft, Assorted bolts, nuts & iron
1 crank shaft, 1 eccentric strap, 1 slide valve spindle, 1 air pump rod.

The foregoing is a correct description,
John Headhead & Sons Manufacturer.

Dates of Survey while building: During progress of work in shops— 1910 Feb. 16, Mar. 17, Apr. 5, 7, 8, 13, 19, 20, 27, May 4, 12, 13, 19, 25, 26, Jun. 1, 7, 16, 20, 28, 30, Jul 7, 13, 18, 21, 23.

During erection on board vessel —

Total No. of visits 26

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 13-4-10 Slides 5-4-10 Covers 13-4-10 Pistons 5-4-10 Rods 5-4-10

Connecting rods 7-4-10 Crank shaft 4-5-10 Thrust shaft 7-4-10 Tunnel shafts 27-4-10 Screw shaft 4-5-10 Propeller 27-5-10

Stern tube 25-5-10 Steam pipes tested 20-6-10 Engine and boiler seatings 7-6-10 Engines holding down bolts 16-6-10

Completion of pumping arrangements 7-7-10 Boilers fixed 14-6-10 Engines tried under steam 23-7-1910

Main boiler safety valves adjusted 8-7-10 Thickness of adjusting washers Main Port 2 1/2", Star 3/8", Donkey 3/8"

Material of Crank shaft Steel Identification Mark on Do. W.D.H. N° 2486 Material of Thrust shaft Steel Identification Mark on Do. CM. 12-5

Material of Tunnel shafts Steel Identification Marks on Do. CM. 12-5-10 Material of Screw shafts Iron Identification Marks on Do. CM. 12-5

Material of Steam Pipes Solid Drawn Copper Test pressure 360 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The Engines & Boilers of this Vessel have been constructed under special survey and the machinery tried under steam & the safety valves of main & donkey boilers adjusted to their working pressure.

The material & workmanship are sound & good & the working of main & auxiliary machinery satisfactory in every way.

The Machinery is now in good order & safe working condition and eligible in my opinion to have notation of + L.M.C. 7-1910

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7-10

F.D.

28/7/10

The amount of Entry Fee. . £ 3 : 0 : When applied for, 27 JUL 1910

Special £ 39 : 9 : When received, 30.7.1910

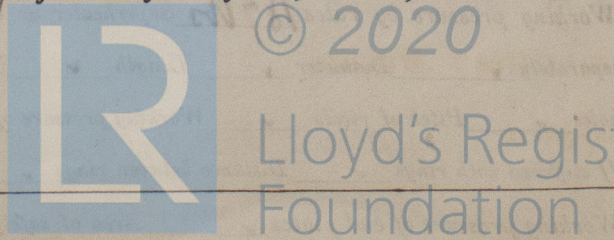
Donkey Boiler Fee £ 2 : 2 :

Travelling Expenses (if any) £ : : :

Committee's Minute

Assigned

C. J. Morris Hancock
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



NEWCASTLE ON TYNE

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