

# REPORT ON BOILERS.

No. 58841

THUR. 28 JUL 1910

Date of writing Report 10 When handed in at Local Office 27 JUL 1910 Received at London Office 27 JUL 1910 Port of Newcastle-on-Tyne.

No. in Survey held at South Shields Date, First Survey 16<sup>th</sup> July 1910 Last Survey 23<sup>rd</sup> July 1910

Reg. Book. S.S. "Indian Prince" (Number of Visits) Gross 2846 Tons Net 1775

on the S.S. "Indian Prince"

Master South Shields Built at South Shields By whom built J. Readhead & Sons Ltd 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

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer Ltd

Letter for record r Total Heating Surface of Boiler 921 sq ft Is forced draft fitted No No. and Description of Boilers One cyl Mult<sup>l</sup> Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 26-5-10

No. of Certificate 7979 Can each boiler be worked separately Yes Area of fire grate in each boiler 24.5 sq ft No. and Description of safety valves to each boiler Two, Spring Loaded Area of each valve 7.06 sq in Pressure to which they are adjusted 100 lbs

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Smallest distance between boilers or uptakes and bunkers or woodwork On deck Mean dia. of boilers 10'-6 1/16" Length 10'-1 1/2"

Material of shell plates Steel Thickness 1/16" Range of tensile strength 28 Ton Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams d.p. lap long. seams d.p. lap Diameter of rivet holes in long. seams 1/16" Pitch of rivets 3 1/4"

Cap of plates or width of butt straps 5 5/8" Per centages of strength of longitudinal joint rivets 66.6% Working pressure of shell by rules 100 lbs Size of manhole in shell 16" x 12" Size of compensating ring 8" x 1/16" No. and Description of Furnaces in each boiler 2, Plain Material Steel Outside diameter 3'-2" Length of plain part 6'-2" Thickness of plates 3/8" crown 3/8" bottom 3/4"

Description of longitudinal joint d.p. lap No. of strengthening rings 2 Hoop Working pressure of furnace by the rules 145 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4" Pitch of stays to ditto: Sides 4' x 10" Back 4' x 9"

Top 10" x 10" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 109 lbs Material of stays Iron Diameter at smallest part 1.75 Area supported by each stay 100 sq in Working pressure by rules 152 End plates in steam space: Material Steel Thickness 15/16"

Pitch of stays 18" How are stays secured N.D. Working pressure by rules 100 Material of stays Steel Diameter at smallest part 5.05

Area supported by each stay 450 sq in Working pressure by rules 115 Material of Front plates at bottom Steel Thickness 3/4" Material of lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 140 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/8" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 13 1/8" Pitch across wide water spaces 14" Working pressures by rules 103 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1 1/2" Length as per rule 2-5 1/2" Distance apart 10" Number and pitch of Stays in each 2, 10"

Working pressure by rules 210 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes 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 \_\_\_\_\_ 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 \_\_\_\_\_

The foregoing is a correct description,  
J. Readhead & Sons Ltd Manufacturer.

Dates of Survey See Machinery Report During progress of work in shops \_\_\_\_\_ while building \_\_\_\_\_ Is the approved plan of boiler forwarded herewith Yes

Total No. of visits \_\_\_\_\_

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey. The material & workmanship are good. The Boiler has been tested to 200 lbs hydraulic pressure. The safety valves adjusted to the working pressure & all found satisfactory.

Survey Fee \_\_\_\_\_ £ charged on Machinery Report When applied for, 19

Travelling Expenses (if any) £ \_\_\_\_\_ When received, 19

S. J. Morris Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute FRI. 29 JUL 1910

Assigned see Minute on Duv. Rpt

58841 attached

