

Rpt. 5a.

REPORT ON BOILERS.

No. 6514

Received at London Office

WED. 20 OCT. 1910

Date of writing Report

19

When handed in at Local Office

25th Sept. 1910

Port of

MIDDLESBROUGH-ON-TEES.

ion of Safety

No. in

Survey held at

Stockton-on-Tees

Date, First Survey

24th Sept.

Last Survey

20th Oct. 1910

Reg. Book.

on the Boiler for Messrs Crabtree & Co Lim^d

(Number of Visits 11)

Gross

Tons }
Net

Master

Built at

By whom built

When built

Engines made at

By whom made

when made

Boilers made at

Stockton

By whom made

Messrs Riley Bros L^d (No 4206)

when made

Registered Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer & Sons

(Letter for record (5)) Total Heating Surface of Boilers 1100 $\frac{1}{2}$ Is forced draft fitted No. and Description of

Boilers Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 20.10.10

No. of Certificate 4520 Can each boiler be worked separately Area of fire grate in each boiler 38 $\frac{1}{2}$ $\frac{1}{2}$ No. and Description of

safety valves to each boiler Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork ^{Inside} dia. of boilers 11'-0" Length 10'-0"Material of shell plates steel Thickness $\frac{15}{16}$ " Range of tensile strength 28-32 Are the shell plates welded or flanged noDescrip. of riveting: cir. seams 2 Riv lap long. seams 2 Riv - 3 Riv Diameter of rivet holes in long. seams $\frac{17}{16}$ " Pitch of rivets $7\frac{3}{4}$ "Lap of plates or width of butt straps 16 x $\frac{15}{16}$ Per centages of strength of longitudinal joint rivets 91.25 Working pressure of shell by plate 86.32rules 187 Size of manhole in shell 16" x 12" Size of compensating ring 9 $\frac{1}{2}$ " x 11 $\frac{1}{2}$ " No. and Description of Furnaces in eachboiler 2 plain Material steel Outside diameter 41" Length of plain part top 76" Thickness of plates crown $\frac{5}{16}$ " bottom 103" bottom 88" man

Description of longitudinal joint welded No. of strengthening rings none Working pressure of furnace by the rules 196 Combustion chamber

plates: Material steel Thickness: Sides $\frac{5}{8}$ " Back $\frac{31}{32}$ " Top $\frac{5}{8}$ " Bottom 1" Pitch of stays to ditto: Sides 8 $\frac{3}{4}$ " x 8" Back 7 $\frac{3}{4}$ " x 8 $\frac{1}{2}$ "

Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 188 Material of stays steel Diameter at

smallest part $\frac{1}{2}$ " Area supported by each stay 78.625 Working pressure by rules 180 End plates in steam space: Material steel Thickness $\frac{15}{16}$ "Pitch of stays 15" x 14" How are stays secured nuts & 6 x $\frac{3}{16}$ long washers Working pressure by rules 184 Material of stays steel Diameter at smallest part 2.41Area supported by each stay 228.6 Working pressure by rules 208 Material of Front plates at bottom steel Thickness $\frac{15}{16}$ " Material ofLower back plate steel Thickness $\frac{15}{16}$ " Greatest pitch of stays 13 $\frac{1}{2}$ " x 8 $\frac{1}{2}$ " Working pressure of plate by rules 215 Diameter of tubes 3 $\frac{1}{2}$ "Pitch of tubes 4 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " Material of tube plates steel Thickness: Front $\frac{15}{16}$ " Back $\frac{3}{4}$ " Mean pitch of stays 10 $\frac{3}{8}$ " Pitch across widewater spaces 13 $\frac{1}{2}$ " Working pressures by rules 185 lbs Girders to Chamber tops: Material steel Depth and thickness ofgirder at centre 7 $\frac{1}{4}$ " x 1 $\frac{1}{2}$ " Length as per rule 29 Distance apart 8" Number and pitch of Stays in each 2 @ 8"Working pressure by rules 180 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 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

FOR The foregoing is a correct description,
RILEY BROS. (BOILERMAKERS) LIMITED.

Manufacturer.

Dates of Survey During progress of work in shops - -
while building During erection on board vessel - - -

1910. Sept. 2. 8. 14. 16. 20. 23. 30. Oct. 6. 13. 18. 20. Is the approved plan of boiler forwarded herewith

Total No. of visits

11

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under

special survey, is of good material and workmanship, and on completion was tested by hydraulic pressure with satisfactory results

Survey Fee £ 3-13-0

When applied for.

Travelling Expenses (if any) £ :

When received.

Wm Morrison

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

Committee's Minute

TUE. 7 MAR 1911

Assigned



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F0856-00/89n