

REPORT ON BOILERS.

No. 7751

Received at London Office

FRI. JAN. 31. 1913

Date of writing Report 29.1.13 1913 When handed in at Local Office

29.1.1913 Port of MIDDLESBROUGH-ON-TEES.

No. in Survey held at
Reg. Book.

Stockton-on-Tees

Date, First Survey 29.1.1913

Last Survey 25.1.1913

on the

S.S. "Dartwen"

(Number of Visits)

5.5. No 630

Tons
Gross
Net

Master

Built at Thornaby

By whom built

Richardson Buck & Co

When built

Engines made at

Stockton

By whom made

Hudson Blair & Co. Ltd.

When made

Boilers made at

Stockton

By whom made

Messrs Riley Bros Ltd (No 4453)

When made 1913

Registered Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR~~ DONKEY. — Manufacturers of Steel

John Spencer & Sons

(Letter for record (S))

Total Heating Surface of Boilers 863 sq ft

Is forced draft fitted

No. and Description of

Boilers

One single ended

Working Pressure 120

Tested by hydraulic pressure to 240

Date of test 25.1.13

No. of Certificate 5013

Can each boiler be worked separately

Area of fire grate in each boiler 29 sq ft

No. and Description of

safety valves to each boiler

2 direct spring

Area of each valve 4.91

Pressure to which they are adjusted 125

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 upper deck

Inside

Mean dia. of boilers 10'-0"

Length 10'-0"

Material of shell plates

steel

Thickness 5/8"

Range of tensile strength 28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams 2 R. lap

long. seams 2 B-2 Riv

Diameter of rivet holes in long. seams 15/16"

Pitch of rivets 5 1/2"

Lap of plates or width of butt straps 9 1/2" x 5/8"

Per centages of strength of longitudinal joint

rivets 90.0

plate 82.9

Working pressure of shell by

rules 122

Size of manhole in shell 19" x 15"

Size of compensating ring 7 x 1 3/4"

No. and Description of

Furnaces in each

boiler

2 plain

Material steel

Outside diameter 36

Length of plain part

top 77"

bottom 104"

Thickness of plates

crown 5/8"

bottom 7/8"

Description of longitudinal joint

Weld

No. of strengthening rings

none

Working pressure of furnace by the rules

151

Combustion chamber

plates: Material steel

Thickness: Sides 9/16"

Back 5/8"

Top 9/16"

Bottom 13/16"

Pitch of stays to ditto: Sides 10 1/2" x 8"

Back 10" x 10 1/2"

Top 10 1/2" x 8"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules 125

Material of stays steel

Diameter at

smallest part 1.45"

Area supported by each stay 84

Working pressure by rules 140

End plates in steam space: Material steel

Thickness 7/8"

Pitch of stays 16" x 17"

How are stays secured

nuts + washers

Working pressure by rules 120

Material of stays steel

Diameter at smallest part 4.11"

Area supported by each stay 255

Working pressure by rules 168

Material of Front plates at bottom steel

Thickness 7/8"

Material of

Lower back plate steel

Thickness 7/8"

Greatest pitch of stays 13" x 10 1/2"

Working pressure of plate by rules 190

Diameter of tubes 3 1/2"

Pitch of tubes 4 5/8" x 4 1/2"

Material of tube plates steel

Thickness: Front 7/8"

Back 5/8"

Mean pitch of stays 10 1/2"

Pitch across wide

water spaces 14 1/2"

Working pressures by rules 122

Girders to Chamber tops: Material steel

Depth and thickness of

girder at centre 7" x 1 1/4"

Length as per rule 27"

Distance apart 10 1/2"

Number and pitch of Stays in each 2 @ 8"

Working pressure by rules 121

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

The foregoing is a correct description,

Riley Bros. & Co. Ltd.

Manufacturer.

Dates of Survey

During progress of work in shops - - -

1912. Nov. 29. Dec. 26. 13. 30. 1913. Jan. 8. 17. 21. 24.

Is the approved plan of boiler forwarded herewith

yes

Total No. of visits 9

During erection on board vessel - - -

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. The boiler is to be fitted on board at this port

This boiler has now been satisfactorily secured on board, examined under steam and

safety valves adjusted

Wm Morrison 25/3/13

Survey Fee ...

£ 2 - 18 - 0

When applied for, 1913

Travelling Expenses (if any) £

When received, 1913

Shipping.

Committee's Minute

FRI. APR. 4 - 1913

Assigned

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

Lloyd's Register
Foundation

W497-0163