

Rpt. 5a.

REPORT ON BOILERS.

No. 6347

WHL 6 III 1910
THU. 18 AUG 1910

Date of writing Report

19

When handed in at Local Office

17th July 1910

Port of

Middlesbrough

No. in

Survey held at

Stockton

Date, First Survey

21st July

Last Survey

20th June 1910

Reg. Book.

on the Donkey Boiler No. 4113 for Messrs J. L. Thompson & Sons SS No. 473

(Number of Visits)

Gross 4431

Net 2771

Master

Dale

Built at

Sunderland

By whom built

J. L. Thompson & Sons Ltd

When built

1910

Engines made at

Stockton

By whom made

Messrs Blair & Co Ltd

when made

1910

Boilers made at

Stockton

By whom made

Riley Bros Ltd

when made

1910

Registered Horse Power

Owners

Mercantile Steamers

Port belonging to

London

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

(Letter for record

(S)

Total Heating Surface of Boilers 840 sq ft

Is forced draft fitted

No

No. and Description of

Boilers One S. E. Cyl. Mult.

Working Pressure 160 lbs

Tested by hydraulic pressure to 320 lbs

Date of test 20.6.10

No. of Certificate 4448

Can each boiler be worked separately

✓

Area of fire grate in each boiler 29.4 sq ft

No. and Description of

safety valves to each boiler

One double spring loaded

Area of each valve

3.98 sq in

Pressure to which they are adjusted

164 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

16"

Mean dia. of boilers

10'-0"

Length

10'-8"

Material of shell plates

Steel

Thickness

25/32"

Range of tensile strength

28-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

S. E. Lap

long. seams

S. E. 5 Rivets

Diameter of rivet holes in long. seams

15/16"

Pitch of rivets

7 1/4"

Lap of plates or width of butt straps

14 1/2"

Per centages of strength of longitudinal joint

rivets 90.

Working pressure of shell by

rules 168 lbs

Size of manhole in shell

16 x 12"

Size of compensating ring

7 1/2 x 25/32"

No. and Description of Furnaces in each

boilers Two plain

Material Steel

Outside diameter

3'-0"

Length of plain part

top 6'-6 1/2"

Thickness of plates

crown 3/4"

bottom 1/8"

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

189 lbs

Combustion chamber

plates: Material

Steel

Thickness: Sides

9/16"

Back

9/16"

Top

17/32"

Bottom

13/16"

Pitch of stays to ditto: Sides

8 x 7"

Back

8 1/4 x 7 3/4"

Top 7 x 7"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

170 lbs

Material of stays

Steel

Diameter at

smallest part

1 3/8"

Area supported by each stay

64 sq in

Working pressure by rules

135 lbs

End plates in steam space: Material

Steel

Thickness

7/8" + 25/32" bbl.

Pitch of stays

18 x 14"

How are stays secured

S. E. x N.

Working pressure by rules

276 lbs

Material of stays

Steel

Diameter at smallest part

2.41"

Area supported by each stay

276.5 sq in

Working pressure by rules

172 lbs

Material of Front plates at bottom

Steel

Thickness

7/8"

Material of

Lower back plate

Steel

Thickness

7/8"

Greatest pitch of stays

12 x 7 3/4"

Working pressure of plate by rules

258 lbs

Diameter of tubes

3 1/4"

Pitch of tubes

4 3/4 x 4 1/2"

Material of tube plates

Steel

Thickness: Front

7/8"

Back

5/8"

Mean pitch of stays

9 1/4"

Pitch across wide

water spaces

Working pressures by rules

174 lbs

Girders to Chamber tops: Material

Steel

Depth and thickness of

girder at centre

7 x 1 1/4"

Length as per rule

2'-3"

Distance apart

7"

Number and pitch of Stays in each

Working pressure by rules

173 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

✓

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. (BOILERMAKERS) LIMITED,
A. Riley
SECRETARY

Manufacturer.

Dates

During progress of

1910. July 21, 24, 28, Mar. 2, 10, 18, May 3

Survey

work in shops - - -

10. 26. June 1, 7, 16, 20.

while

During erection on

May 11, 13, Aug 8, 9.

building

board vessel - - -

Is the approved plan of boiler forwarded herewith

Yes

Total No. of visits

17

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This boiler had been constructed under Special Survey, is of good material and workmanship, and has been tested by hydraulic pressure with satisfactory results. This Donkey Boiler has been mounted, securely fitted on board, & safety valves adjusted under steam to above pressure.

Survey Fee

...

£ 2-16-0

When applied for

19

Travelling Expenses (if any) £

When received

19

William Butler

W. Morrison & Co

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

Committee's Minute

FRI. 19 AUG 1910

Assigned

See Minute on 7th report.



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Lloyd's Register

Foundation

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