

## REPORT ON BOILERS.

No. 8074.

WED. AUG. 20. 1913

Date of writing Report 18.8.13 1913

When handed in at Local Office 19.8. 1913

Received at London Office

Port of Middlesbrough

No. in Survey held at

Date, First Survey 12<sup>th</sup> June

Last Survey 25 Sept 1913

Reg. Book.

on the Steel S.S. Helmsloch

(Number of Visits 15)

(S.S.N. 180)

Gross 4460

Net 2575

Master

Edford

Built at

Sunderland

By whom built

W. Pickersgill &amp; Sons Ltd

When built

1913

Engines made at

Sunderland

By whom made

John Dickinson &amp; Sons Ltd

When made

1913

Boilers made at

Stockton

By whom made

Messrs Riley Bros Ltd (No. 4530)

When made

1913

Registered Horse Power

Owners

Strath &amp; John

Port belonging to

Cardiff

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

John Spencer &amp; Sons

Letter for record

(S)

Total Heating Surface of Boilers

1090 sq

Is forced draft fitted

No

No. and Description of

Boilers

One single ended

Working Pressure

120 Tested by hydraulic pressure to

240

Date of test 14.8.13

No. of Certificate

5139

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

35 sq

Safety valves to each boiler

2 Spring

Area of each valve

5.4 sq

Pressure to which they are adjusted

123

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

1' 3" Inside

Mean dia. of boilers

11'-0"

Length

10'-6"

Material of shell plates

Steel

Thickness

1/2"

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-3 Riv

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

7"

Pitch of plates or width of butt straps

13 3/8 x 1/2"

Per centages of strength of longitudinal joint

5 Rivets per pitch

rivets

106

Working pressure of shell by

Rules

130

Size of manhole in shell

19" x 15"

Size of compensating ring

7 x 1 1/2" in. nail

No. and Description of Furnaces in each

Boiler

2 plain

Material of shell plates

Steel

Outside diameter

40"

Length of plain part

top 79 3/4"

Thickness of plates

crown 2 1/2"

bottom 73 in.

Description of longitudinal joint

Weld

No. of strengthening rings

none

Working pressure of furnace by the rules

132

Combustion chamber

Material of shell plates

Steel

Thickness: Sides

3/8"

Back

3/8"

Top

3/8"

Bottom

2 1/2"

Pitch of stays to ditto: Sides

10 x 9"

Back

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

121

Material of stays

Steel

Diameter at

smallest part

Area supported by each stay

81

Working pressure by rules

143

End plates in steam space: Material

Steel

Thickness

1 1/2"

How are stays secured

nuts

Working pressure by rules

126

Material of stays

Steel

Diameter at

smallest part

2.87

Area supported by each stay

236

Working pressure by rules

126

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of

Over back plate

Steel

Thickness

1 1/2"

Greatest pitch of stays

14 x 9"

Working pressure of plate by rules

166

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4 x 4 3/4"

Material of tube plates

Steel

Thickness: Front

1 1/2"

Back

1 1/2"

Mean pitch of stays

11"

Pitch across wide

Clear spaces

14"

Working pressures by rules

129

Girders to Chamber tops: Material

Steel

Depth and thickness of

Girders

at centre

Length as per rule

30"

Distance apart

7 1/2"

Number and pitch of Stays in each

209"

Working pressure by rules

138

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

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

How stayed

Are they fitted with easing gear

Stiffened with rings

Distance between rings

Working pressure by rules

Working pressure of end plates

Area of safety valves to superheater

The foregoing is a correct description,

RILEY BROS. (BOILERMAKERS) LIMITED,

Manufacturer.

Is the approved plan of boiler forwarded herewith

yes

Total No. of visits

15

Return for duplicate/Boiler

During progress of

work in shops

June 12. 14. 28. July 2. 5. 10. 11. 16. 23. 30. 31. Aug 1. 6. 8. 14

Is the approved plan of boiler forwarded herewith

yes

During erection on

board vessel

Sep 18. 22. 25

Total No. of visits

18

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

This boiler has been built under

Annual Survey, is of good material and workmanship and on completion was tested by

hydraulic pressure with satisfactory results. Secured in place, mounted

and Safety valves adjusted to W.P.

J. J. Findlay

Survey Fee ... £ 3 - 13 - 0

Travelling Expenses (if any) £

When applied for, MONTHLY 191

When received, 191

Committee's Minute TUE. OCT. 7 - 1913

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

Lloyd's Register Foundation

W1629-0023