

# REPORT ON BOILERS.

 Std. No. 30134  
 Made No. 13752

Received at London Office 18 JUL 1929

Date of writing Report 16. 7. 1929 When handed in at Local Office

16. 7. 1929 Port of MIDDLESBROUGH

No. in Survey held at

STOCKTON

Date, First Survey 6 May

Last Survey

16. 7. 1929

on the

S.S. GLAISDALE.

(Number of Visits 15)

Tons

 Gross 3777  
 Net 2262

Master

Built at Sunderland.

By whom built Sir J. Laing &amp; Co

Yard No. 707. When built 1929

Engines made at

Sunderland

By whom made

George Rank Ltd.

Engine No. 1173 When made 1929

Boiler made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd

Boiler No. 5902 When made 1929

Nominal Horse Power

341

Owners

Headlam &amp; Sons.

Port belonging to

Whitby.

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby &amp; Co. S. Veremigle Stahlwerke A.G. Stahl- &amp; Walzwerke

Thyssen.

(Letter for Record S.)

Total Heating Surface of Boilers

1010 sq. ft.

Is forced draught fitted

No

Coal or Oil fired Coal.

Pressure tested by hydraulic pressure to

320 lbs.

Date of test 12. 7. 29

No. of Certificate 6726.

Can each boiler be worked separately

Area of Firegrate in each Boiler

34 sq. ft.

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

6.46 sq. ft.

Pressure to which they are adjusted

185 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

6'-0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Fitted between decks.

Is the bottom of the boiler insulated

No.

Largest internal dia. of boilers

10'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

7/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

Long. seams T.R.D.B.S. (5 rivets)

Diameter of rivet holes in

circ. seams

1 1/16"

long. seams

5/8"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate 67.8

rivets 51.2

Percentage of strength of circ. intermediate seam

plate 86.3

rivets 88.3

Percentage of strength of longitudinal joint

plate 86.3

rivets 88.3

Working pressure of shell by Rules

18.1 lbs.

Thickness of butt straps

outer 3/32"

inner 3/32"

No. and Description of Furnaces in each Boiler

2 Plain

Material

Steel

Tensile strength

26/30

Smallest outside diameter

39"

Length of plain part

top 78 3/4"

bottom 86 1/2"

Thickness of plates

crown 3/4"

bottom 3/4"

Description of longitudinal joint

Weld

Dimensions of stiffening rings on furnace or c.e. bottom

Yes

Working pressure of furnace by Rules

180 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays

15 x 13 1/4"

How are stays secured

D.N. &amp; W.

Working pressure by Rules

180 lbs.

End plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

27/32"

Can pitch of stay tubes in nests

10 1/2"

Pitch across wide water spaces

14" x 8 1/2"

Working pressure

front 181 lbs.

back 196

Orders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

Centre 7" x 3/4" (double)

Length as per Rule

2'-6"

Distance apart

7 1/2"

No. and pitch of stays

each

2 - 9 1/2"

Working pressure by Rules

190 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

2 1/8"

Back

5/8"

Top

2 1/8"

Bottom

1 1/2"

Pitch of stays to ditto

Sides 8 1/2" x 9 1/2"

Back

9" x 8 1/4"

Top

7 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

27"

Thickness

27/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays at wide water spaces

14" x 8 1/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

220 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay

2 1/8"

No. of threads per inch

6

Area supported by each stay

199 sq. in.

Working pressure by Rules

197 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part

1 5/8"

No. of threads per inch

9

Area supported by each stay

74 1/2 sq. in.



Working pressure by Rules **203 lbs.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter { At turned off part, **1 1/4"**  
Over threads  
No. of threads per inch **9.** Area supported by each stay **91 sq** Working pressure by Rules **200 lbs.**  
Tubes: Material **iron** External diameter { Plain **3 1/4" 6 3/16"** Thickness { **8 wks.** No. of threads per inch **9.**  
Stay **3" 6 3/4"** Pitch of tubes **4 1/4" x 4 1/2"** Working pressure by Rules **p. 230 lbs. & 200 lbs.** Manhole compensation: Size of opening in  
shell plate **20" x 16"** Section of compensating ring **8" x 1"** No. of rivets and diameter of rivet holes **40 - 1 1/2"**  
Outer row rivet pitch at ends **8"** Depth of flange if manhole flanged Steam Dome: Material  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate  
Rivets  
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of  
stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch  
of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of Tubes  
Steel castings  
Number of elements Material of tubes Internal diameter and thickness of tubes  
Material of headers Tensile strength Thickness Can the superheater be shut off and  
the boiler be worked separately Is a safety valve fitted to every part of the superheater which can be shut off from the boiler  
Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per  
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
tubes, castings and after assembly in place Are drain cocks or valves fitted  
to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

**Yes.**  
**BILLY BROS. (BOILERMAKERS) LIMITED.**  
The foregoing is a correct description.  
**J. H. Shields** SECRETARY, Manufacturer.

Dates of Survey { During progress of work in shops - - 1929: May 6, 9, 15, 22, 30 Jun 19, 14, 18, 21, 25  
while building { During erection on board vessel - - - 28 July 1-6, 9, 12  
Are the approved plans of boiler and superheater forwarded herewith **Yes.**  
(If not state date of approval.)  
Total No. of visits **15**

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

This boiler is a duplicate of Messrs. Riley, No 5788 (Mar. Rpt. 13323).  
The materials and workmanship are good.  
This boiler has been built under special survey in accordance with the Rules and Approved Plan. It will be installed at Sunderland.  
The boiler has been satisfactorily fitted in the vessel & the safety valves adjusted under steam. For notation see machinery report.

Survey Fee £ **6-14-0.** When applied for, **Monthly**  
Travelling Expenses (if any) £ **0** When received, **192**

**P. J. Mac**  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRL 20 SEP 1929**

Assigned

*See Sld Rpt to 3034 attached*



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Foundation