

## REPORT ON BOILERS.

No. 12098

Date of writing Report

192

When handed in at Local Office

7.10.24 192

Received at London Office

-4 OCT 1924

No. in  
Reg. Book.

Survey held at

Stockton-on-Tees

Port of

Middlesbrough

Date, First Survey

1st August

Last Survey

11th Sep

1924

on the

Steel Screw Steamer REEDPOOL

(Number of Visits

6

Tons

Gross

Net

Master

Built at

Stockton

By whom built

Ropner S. B. Co Ltd

Yard No.

545

When built

1924

Engines made at

Stockton

By whom made

Thos Blair &amp; Co Ltd

Engine No.

1986

When made

1924

Boilers made at

Stockton

By whom made

Thos Riley Bros Ltd

Boiler No.

5331

When made

1924

Nominal Horse Power

Owners

Sir R. Ropner &amp; Co Ltd

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Thos D. Colville &amp; Sons Ltd &amp; Thos Steel &amp; Co of Scotland Ltd.

(Letter for Record (S) ✓)

Total Heating Surface of Boilers

975 ft<sup>2</sup>

Is forced draught fitted

no ✓

Coal or Oil fired

coal ✓

No. and Description of Boilers

One single ended ✓

Working Pressure

100 ✓

Tested by hydraulic pressure to

200

Date of test

11.9.24

No. of Certificate

6391 ✓

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

34.3 ft<sup>2</sup> ✓

No. and Description of safety valves to each boiler

2 direct spring High Lift ✓

Area of each set of valves per boiler

{ per Rule 7.06 ✓  
as fitted 7.96 ✓

Pressure to which they are adjusted

105 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

on upper deck

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

10' 6" ✓

Length

10' 0" ✓

Shell plates: Material

steel ✓

Tensile strength

28-32 ✓

Thickness

2 1/32" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

{ end 2 Riv. Lap ✓  
inter. ✓

long. seams

2 Butt - 2 Riveted

Diameter of rivet holes in

{ circ. seams 15/16" ✓  
long. seams 15/16" ✓

Pitch of rivets

{ 3" x 6" ✓  
3 7/8" ✓

Percentage of strength of circ. end seams

{ plate 68.66 ✓  
rivets 50.2 ✓

Percentage of strength of circ. intermediate seam

{ plate ✓  
rivets ✓

Percentage of strength of longitudinal joint

{ plate 73.81 ✓  
rivets 83.70 ✓  
combined ✓

Working pressure of shell by Rules

116 lbs

Thickness of butt straps

{ outer 9 5/8" x 7/16" ✓  
inner 9 5/8" x 7/16" ✓

No. and Description of Furnaces in each Boiler

Two plain ✓

Material

steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

29" ✓

Length of plain part

{ top 74 1/2" ✓  
bottom 81" ✓

Thickness of plates

{ crown 9" 1/16" ✓  
bottom 9" 1/16" ✓

Description of longitudinal joint

weld ✓

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

none

Working pressure of furnace by Rules

103 lbs

End plates in steam space: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

R 27" F 7" ✓

Pitch of stays

18" x 18" ✓

19" x 15" ✓

How are stays secured

Double nuts &amp; 8 1/2" x 5/8" loose washers ✓

Working pressure by Rules

121 lbs

Tube plates: Material

{ front steel ✓  
back steel ✓

Tensile strength

{ 26-30 tons ✓  
26-30 tons ✓

Thickness

{ 7/8" ✓  
5/8" ✓

Mean pitch of stay tubes in nests

10 3/8" ✓

Pitch across wide water spaces

14" x 9" ✓

Working pressure

{ front 136 lbs ✓  
back 127" ✓

Girders to combustion chamber tops: Material

steel ✓

Tensile strength

28-32 tons ✓

Depth and thickness of girder

centre

6" x 1 1/4" ✓

Length as per Rule

28" ✓

Distance apart

9 1/2" ✓

No. and pitch of stays

each

2 @ 8 3/4" ✓

Working pressure by Rules

104 lbs

Combustion chamber plates: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

1/2" ✓

Back

17" 3/32" ✓

Top

1/2" ✓

Bottom

3/4" ✓

Pitch of stays to ditto: Sides

9 1/2" x 8 3/4" ✓

Back

10" x 9" ✓

Top

9 1/2" x 8 3/4" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

101 lbs

Front plate at bottom: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

7/8" ✓

Lower back plate: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

27" 3/32" ✓

Pitch of stays at wide water space

14" x 10" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

197 lbs

Main stays: Material

steel ✓

Tensile strength

28-32 tons ✓

Diameter

{ At body of stay, 2 3/8" ✓  
or 2 3/8" ✓  
Over threads

No. of threads per inch

6 ✓

Area supported by each stay

351 ✓

Working pressure by Rules

112 lbs

Screw stays: Material

steel ✓

Tensile strength

26-30 tons ✓

Diameter

{ At turned off part, 1 3/8" ✓  
or 1 3/8" ✓  
Over threads

No. of threads per inch

9 ✓

Area supported by each stay

90 ✓



REPORT ON BOILERS

Working pressure by Rules 112 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/2" or Over threads 1 1/2"  
No. of threads per inch 9 Area supported by each stay 110 Working pressure by Rules 113 lb  
Tubes: Material iron External diameter { Plain 3 1/2" Stay 3" Thickness Nº 10-4.5.9 No. of threads per inch 9  
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 130 lb Manhole compensation: Size of opening in  
shell plate 20" x 16" Section of compensating ring 7 x 3/4 H.C. rail No. of rivets and diameter of rivet holes 26 @ 1 5/16  
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged ✓ Steam Dome: Material none  
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 23 inclusive for boilers been complied with OR yes

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

Dates { During progress of 1924 Aug. 17, 27, Sep. 24 Are the approved plans of boiler and superheater forwarded herewith yes  
Survey { work in shops - - -  
while { During erection on ✓  
building { board vessel - - -  
Total No. of visits 6 Return for duplicate ✓

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 has been satisfactorily secured on board in accordance with the Rules. Examined under steam and safety valves adjusted.

Survey Fee ... £ 6-10-0 When applied for MONTHLY 1924/c. (Sept 21)  
Travelling Expenses (if any) ✓ When received, 192

Wm Morrison  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 7 OCT 1924  
Assigned See Mdb 12099