

REPORT ON BOILERS.

No. 12231.

Received at London Office 29 JAN 1925

of writing Report

192

When handed in at Local Office

28/1/1925

Port of

Middlesbrough

open in Book.

Survey held at

Stockton-on-Tees

Date, First Survey Dec 20th 1924

Last Survey

26-1-

1925

on the

Donkey Boiler for Messrs Furness No. 78.
S/S "Lynebridge"

(Number of Visits 4)

Gross 4442

Tons Net 2778

er

Built at Huerton Hill on Tees By whom built Furness S.B.C. Ltd Yard No. 78 When built 1925

nes made at

Middlesbrough

By whom made

Richardson Westgirth & Co. Ltd

Engine No. 2569

When made 1925

ers made at

Stockton-on-Tees

By whom made

Riley Bros Ltd

Boiler No. 5572

When made 1925

and final Horse Power

Owners North of England S.S.C. Ltd.

Port belonging to West Hartlepool

(Crosby, Magee & Co. mgs)

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

The Steel Coy of Scotland Ltd & David Colville & Son Ltd

(Letter for Record)

(S) 11

al Heating Surface of Boilers

1020 sq

Is forced draught fitted

No

Coal or Oil fired

Coal

and Description of Boiler

One Single Ended

Working Pressure

100 lbs

ed by hydraulic pressure to

200

Date of test

26-1-25

No. of Certificate

6431

Can each boiler be worked separately

Yes

a of Firegrate in each Boiler

33 3/4 sq

No. and Description of safety valves to each boiler

2 Direct Spring

a of each set of valves per boiler

per Rule 11.077

as fitted 11.88

Pressure to which they are adjusted

100 lbs

Are they fitted with easing gear

Yes

ase of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No

allest distance between boilers

Back 11" Sides 2'-0" x 2'-8"

Is oil fuel carried in the double bottom under boilers

No

allest distance between shell of boiler and tank top plating

2'-0"

Is the bottom of the boiler insulated

Yes

gest internal dia. of boilers

11'-0"

Length

10'-0"

Shell plates: Material

S

Tensile strength

28-32

ckness

9/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR & LAP

seams

{ Double Butt Straps
Double Riveted
3 rivets in pitch

Diameter of rivet holes in

circ. seams

15/16"

long. seams

3/4"

Pitch of rivets

3" x 6"

4 3/16"

centage of strength of circ. end seams

plate

68.66

rivets

50.2

Percentage of strength of circ. intermediate seam

plate

V

rivets

V

centage of strength of longitudinal joint

plate

82.1

rivets

86.3

combined

92.9

Working pressure of shell by Rules

101 lbs

ckness of butt straps

{ outer 8" x 15/32"
inner 8" x 19/32"

No. and Description of Furnaces in each Boiler

two plain.

terial

Steel

Tensile strength

26-30 tons

Smallest outside diameter

42"

gth of plain part

{ top 74.84
bottom 81.5

Thickness of plates

{ crown 19/32"
bottom 19/32"

Description of longitudinal joint

weld

100 lbs

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

None

Working pressure of furnace by Rules

106 lbs

l plates in steam space: Material

Steel

Tensile strength

26-30

Thickness

2 1/32"

Pitch of stays

7 1/2" x 14"

o are stays secured

Double nuts & washers 7 x 1/2"

Working pressure by Rules

102 lbs

e plates: Material

{ front Steel
back Steel

Tensile strength

26-30 tons

Thickness

2 1/32"

7/8"

n pitch of stay tubes in nests

10' 3 7/8"

Pitch across wide water spaces

14" x 9"

Working pressure

{ front 104 lbs
back 127 lbs

ders to combustion chamber tops: Material

Steel

Tensile strength

28-32

Depth and thickness of girder

centre

5 1/2" x 1 1/2"

Length as per Rule

28"

Distance apart

7 1/2"

No. and pitch of stays

each

2 C 8 1/2"

Working pressure by Rules

130 lbs

Combustion chamber plates: Material

steel

sile strength

26-30

Thickness: Sides

17/32"

Back

9/16"

Top

17/32"

Bottom

29/32"

ch of stays to ditto:

Sides

10 x 8 1/2"

Back

9 3/4 x 8 3/4"

Top

8 1/2 x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

orking pressure by Rules

111 lbs

Front plate at bottom: Material

steel

Tensile strength

26-30

ckness

2 1/32"

Lower back plate: Material

steel

Tensile strength

26/30 tons

Thickness

2 1/32"

ch of stays at wide water space

14" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

orking Pressure

126 lbs

Main stays: Material

steel

Tensile strength

28-32

meter

{ At body of stay, 2"
Over threads, 2"

No. of threads per inch

6

Area supported by each stay

210 sq"

orking pressure by Rules

124 lbs

Screw stays: Material

S

Tensile strength

26-30

meter

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

No. of threads per inch

9

Area supported by each stay

85.4 sq"

Lloyds Register
Foundation
W92-0087

Working pressure by Rules 118 Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part, or Over threads 1 3/8

No. of threads per inch 9 Area supported by each stay 9625 Working pressure by Rules 105 lbs

Tubes; Material iron External diameter { Plain 3 1/4" Stay 3" Thickness { 1010 S.W.C 5/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 130 Manhole compensation: Size of open shell plate 20" x 16" Section of compensating ring 7 x 3/4" No. of rivets and diameter of rivet holes 36 - 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 72" 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 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 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 _____ Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure _____ tubes _____, castings _____ and after assembly in place _____ Are drain cocks or valves to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with FOR
RILEY BROS. (BOILERMAKERS) LIMITED
The foregoing is a correct description,
J. H. Shields SECRETARY, Manufacturer

Dates of Survey { During progress of work in shops - - - 1924 Dec 20 1925 Jan 15 20 26 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Copy

while building { During erection on board vessel - - - Total No. of visits 14

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler is a duplicate of Builders No 5550 Que Rpt 12100. it has been built under Special Survey, is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results.
This boiler will be fitted on board at this Port.
Fitted on board at Middlesbrough and efficiently secured in position, examined under steam and safety valves adjusted
W. H. Roberts

Survey Fee ... £ 6 : 16 : - When applied for, MONTHLY A/c.
Travelling Expenses (if any) £ : : When received, 102

Committee's Minute TUES. 24 MAR 1925
Assigned See other rpt
Same No