

REPORT ON BOILERS.

No. 12291

Received at London Office

Date of writing Report

6/3/1925

When handed in at Local Office

9/3/1925

Port of

Middlesbrough

Survey held at

Middlesbrough

Date, First Survey

White Building

Last Survey

5/3/1925

on the

Steel Screw Steamer "Tynebridge"

(Number of Visits)

2

Gross 4442
Net 2778

ter

Built at

Haverton Hill-on-Tees

By whom built

Furness S.B. Coy. Ltd

Yard No.

78

When built

1925

ines made at

Middlesbrough

By whom made

Richardsons Westgarth & Co. Ltd

Engine No

2569

When made

1925

ers made at

do

By whom made

do

Boiler No.

2569

When made

1925

inal Horse Power

✓

Owners

North of England S/S. Co. Ltd

Port belonging to

West Hartlepool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons Ltd

(Letter for Record

(S)

al Heating Surface of Boilers

6058 sq ft

Is forced draught fitted

no

Coal or Oil fired

coal

and Description of Boilers

Two Single Ended

Working Pressure

180 lbs

ted by hydraulic pressure to

320 lbs

Date of test

9-1-25

No. of Certificate

6425

Can each boiler be worked separately

yes

a of Firegrate in each Boiler

76 sq ft

No. and Description of safety valves to each boiler

Two — Direct Spring

a of each set of valves per boiler

per Rule

19.72 sq ft

as fitted

22.08 sq ft

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

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

✓

llest distance between boilers or uptakes and bunkers or woodwork

1'-9"

Is oil fuel carried in the double bottom under boilers

no

llest distance between shell of boiler and tank top plating

2'-5 1/2"

Is the bottom of the boiler insulated

yes

gest internal dia. of boilers

17'-0 5/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29-33 tons

ickness

1 1/32"

Are the shell plates welded or flanged

✓

Description of riveting: circ. seams

end

Pop DR.

seams

Double Butt Straps

Triple Riveted

5 Rivets in Pitch

Diameter of rivet holes in

circ. seams

1 3/8"

Pitch of rivets

3 5/8"

9 1/2"

centage of strength of circ. end seams

plate

62.07

Percentage of strength of circ. intermediate seam

plate

✓

centage of strength of longitudinal joint

plate

85.52

Working pressure of shell by Rules

180 lbs

ickness of butt straps

outer

1 1/16"

inner

1 5/32"

No. and Description of Furnaces in each Boiler

Four Morrison Suspension

aterial

Steel

Tensile strength

26-28 tons

Smallest outside diameter

42.625"

gth of plain part

top

✓

bottom

✓

Thickness of plates

crown

9/16"

Description of longitudinal joint

Weld

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

✓

Working pressure of furnace by Rules

191 lbs

l plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Pitch of stays

18 1/2" x 23 1/4"

o are stays secured

Double Nuts

Working pressure by Rules

182 lbs

be plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

7/8"

25/32" & 13/16"

an pitch of stay tubes in nests

10.69"

11.125"

Pitch across wide water spaces

14 1/4" x 8 3/4"

Working pressure

front

189 lbs

back

192 & 191 lbs

orders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

centre

9" x 1 1/2"

Length as per Rule

31.75"

each

3 c

7 1/2"

Working pressure by Rules

188 lbs

Combustion chamber plates: Material

Steel

nsile strength

26-30 tons

Thickness: Sides

1 1/16"

Back

23/32"

Top

2 1/32"

Bottom

1 1/16"

ch of stays to ditto:

Sides

10" x 8 3/4"

Back

10 7/8" x 8 1/2"

Top

9 1/2" x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

orking pressure by Rules

188 lbs

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

ickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

27/32"

ch of stays at wide water space

15" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

orking Pressure

195 lbs

Main stays: Material

Steel

Tensile strength

28-32 tons

imeter

At body of stay,

or

3 1/4"

No. of threads per inch

6

Area supported by each stay

418 sq in

orking pressure by Rules

192 lbs

Screw stays: Material

Steel

Tensile strength

26-30 tons

imeter

At turned off part,

or

1 3/4"

No. of threads per inch

9

Area supported by each stay

93.5 sq in

Working pressure by Rules 193 lbs Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 7/8"
No. of threads per inch 9 Area supported by each stay 110.5 sq" Working pressure by Rules 193 lbs
Tubes; Material iron External diameter ^{Plain} 3 1/4" ^{Stay} 3 1/4" 4 3/2" Thickness 10.8 SWG ^{5/16", 3/8", 7/16"} No. of threads per inch 9
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 226 & 230 lbs Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 8 1/2" x 1 1/32" No. of rivets and diameter of rivet holes 30 - 1 7/16"
Outer row rivet pitch at ends 9 1/2" 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} _____
Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of rivets _____
How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and diameter of rivets in outer row in dome connection to shell _____

Type of Superheater _____ Manufacturers of ^{Tubes} _____
Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____
Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off from the boiler?
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 by 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 yes
The foregoing is a correct description,
W. H. Roberts
MANAGER, KIDLEBROOK WORKS

Dates of Survey ^{During progress of work in shops - -} while building Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
^{while building} ^{During erection on board vessel - -} Total No. of visits See Engr's Rpt.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These boilers have been constructed under Special Survey, are of good material and workmanship and on completion were tested by hydraulic pressure with satisfactory results. They have now been fitted on board in accordance with the Rules, examined under steam and safety valves adjusted.

Survey Fee ... £ See Engr's Rpt : When applied for, 192
Travelling Expenses (if any) £ See Engr's Rpt : When received, 192

Committee's Minute TUES. 24 MAR 1925

Assigned See other rpt
Same No.