

REPORT ON BOILERS.

No. 16630.

Received at London Office

8 MAY 1928

Writing Report

3rd May 1928

When handed in at Local Office

1928

Port of

WEST HARTLEPOOL

Survey held at

Hartlepool

Date, First Survey

21st Dec/27

Last Survey

2nd May 1928

on the Main Boilers D178 for S. 'ROYSTON'

(Number of Visits

12)

Gross

2722

Tons

Net

1641

Built at

Middlesbrough

By whom built

Smiths Dock Co.

Yard No.

844

When built

1929

Made at

Middlesbrough

By whom made

Smiths Dock Co. Ltd

Engine No.

312

When made

1929

Made at

Hartlepool

By whom made

Richardsons Westgarth & Co. Ltd

Boiler No.

D178

When made

1928

Horse Power

Owners

The Granta Steam Shipping Co. Ltd

Port belonging to

Newcastle.

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D Colville & Sons Ltd

(Letter for Record

S.)

Heating Surface of Boilers

4554 sq. ft.

Is forced draught fitted

Coal or Oil fired

Coal

Description of Boilers

2 single ended

Working Pressure

180 lbs

by hydraulic pressure to

320 lbs

Date of test

19.4.28

No. of Certificate

3736

Can each boiler be worked separately

Yes

Firegrate in each Boiler

60 sq. ft.

No. and Description of safety valves to each boiler

Pair Spring loaded

each set of valves per boiler

per Rule

14.6

as fitted

18.6

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

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

Yes

distance between boilers or uptakes and bunkers or woodwork

3'-0"

Is oil fuel carried in the double bottom under boilers

No

distance between shell of boiler and tank top plating

1'-11 1/2"

Is the bottom of the boiler insulated

No

internal dia. of boilers

15'-6"

Length

10'-9"

Shell plates: Material

Steel

Tensile strength

28/32

ss

1 17/64"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D.P. 24

ms

J.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 3/2"

long. seams

1 3/2"

Pitch of rivets

3 3/4"

9"

age of strength of circ. end seams

plate

65.8

rivets

44.7

Percentage of strength of circ. intermediate seam

plate

85.7

rivets

age of strength of longitudinal joint

plate

85.7

rivets

87

combined

88.8

Working pressure of shell by Rules

180 lbs

ss of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Deightons

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-8 3/8"

of plain part

top

Yes

bottom

Yes

Thickness of plates

9/16"

Description of longitudinal joint

welded

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

Yes

Working pressure of furnace by Rules

184 lbs

ates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 3/2"

Pitch of stays

22"x21 1/2"

e stays secured

Double nuts & washers

Working pressure by Rules

181 lbs

ates: Material

front

Steel

back

Steel

Tensile strength

26/30

Thickness

3/8"

3/4"

pitch of stay tubes in nests

11 3/16" x 9 1/4"

Pitch across wide water spaces

14 1/2"

Working pressure

front

184 lbs

back

186 lbs

s to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

re

8 3/4"

1 7/8"

Length as per Rule

2'-8 1/2"

Distance apart

11 3/4"

No. and pitch of stays

3

8"

Working pressure by Rules

182 lb

Combustion chamber plates: Material

Steel

strength

26/30

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

of stays to ditto: Sides

10"x10"

Back

9 3/4"x10 3/8"

Top

8"x11 3/4"

Are stays fitted with nuts or riveted over

nuts

ing pressure by Rules

180 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

ess

7/8"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

7/8"

of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

nuts

ster of Shipping Pressure

200 lbs

Main stays: Material

Steel

Tensile strength

28/32

er

At body of stay,

3 1/8"

No. of threads per inch

6

Area supported by each stay

22"x21 1/2"

er

Over threads

3 1/2"

Screw stays: Material

Steel

Tensile strength

26/30

er

At turned off part,

1 3/4"

No. of threads per inch

9

Area supported by each stay

10"x10"

Lloyd's Register

U76-0216

Working pressure by Rules 181 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8" ✓
No. of threads per inch 9 ✓ Area supported by each stay 10 1/8" x 11 5/8" Working pressure by Rules 181 lb
Tubes: Material Iron ✓ External diameter { Plain 3 1/4" ✓ Thickness { 8 W.G. ✓ No. of threads per inch 9 ✓
Pitch of tubes 9 1/4" x 11 5/8" Working pressure by Rules 188 lb Manhole compensation: Size of opening in
shell plate 13" x 16 1/2" Section of compensating ring 13 7/16" x 1 17/64" No. of rivets and diameter of rivet holes 32 1 3/32" ✓
Outer row rivet pitch at ends 9" 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 yes ✓
The foregoing is a correct description,
FOR RICHARDSON, WESTCARTH & CO. LIMITED. Manufacturer.
J. G. White GENERAL MANAGER.
Dates of Survey { During progress of work in shops - - - May 2. 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 12

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
These boilers have been built under Special Survey. The materials and workmanship are good and efficient.
On completion they satisfactorily withstood the hydraulic test.
They have been despatched to Middlesbrough for fitting on board.
These boilers have been securely fitted aboard and their safety valves have been adjusted and tested under steam with satisfactory results.

Survey Fee ... £ : : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192
R.D. Shulston.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute UE. 15 JAN 1929
Assigned See P. 6. 1st. attached
Ind. 1357