

REPORT ON BOILERS.

No.

16473

Received at London Office

30 MAR 1927

Date of writing Report 29 March 1927

When handed in at Local Office 29 March 1927

Port of

WEST HARTLEPOOL

No. in Survey held at

Hartlepool

Date, First Survey

13th May 1926

Last Survey

22nd March 1926

1914 on the

S.S. GYPSUM KING.

(Number of Visits)

Gross 3842
Net 1938

Master

Built at

Middlesbrough

By whom built

Furness S.B. Co.

Yard No.

108

When built

1924

Engines made at

Hartlepool

By whom made

Richardson Westgarth & Co.

Engine No.

2656

When made

1924

Boilers made at

Hartlepool

By whom made

Richardson Westgarth & Co.

Boiler No.

2656

When made

1924

Nominal Horse Power

Owners

Port belonging to

Middlesbrough

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons Ltd

(Letter for Record

S.)

Total Heating Surface of Boilers

5412 sq

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

Two Single Ended

Working Pressure

190 lb/sq in

Tested by hydraulic pressure to

335

Date of test

26-2-27

No. of Certificate

3693

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

69.45 sq

No. and Description of safety valves to each boiler

2 direct opening

Area of each set of valves per boiler

per Rule

14.4 sq

as fitted

22.08 sq

Pressure to which they are adjusted

195

Are they fitted with easing gear

Yes

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

No donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork

No side bunkers

oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

15'-9 3/8"

Length

11'-9" int

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

1 9/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

Double

Pitch of rivets

Triple Double Butt Strap

Diameter of rivet holes in

circ. seams

1 1/4"

long. seams

1 5/16"

Pitch of rivets

3 1/2"

8 15/16"

Percentage of strength of circ. end seams

plate

64.2

rivets

68.3 of end

Percentage of strength of circ. intermediate seam

plate

85.32

rivets

85.8

Percentage of strength of longitudinal joint

plate

85.32

rivets

85.8

combined

84.6

Working pressure of shell by Rules

190.

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

3 Morrison

Material

Steel

Tensile strength

26/30

Smallest outside diameter

44 13/16"

Length of plain part

top

bottom

Thickness of plates

crown

2 1/32"

bottom

2 1/32"

Description of longitudinal joint

weld

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

Yes

Working pressure of furnace by Rules

191

Plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 7/32"

Pitch of stays

14 3/4" x 22 1/2"

Are stays secured

Double Nuts

Working pressure by Rules

191

Front plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

27/32"

3/4"

Pitch of stay tubes in nests

11 1/4" x 7 1/2"

Pitch across wide water spaces

13 1/2"

Working pressure

front 205

back 209

Boilers to combustion chamber tops: Material

Steel

Tensile strength

29/32

Depth and thickness of girder

Centre

8 1/2" x 1 3/4"

Length as per Rule

2-9 3/8"

Distance apart

9"

No. and pitch of stays

Each

3 7 1/2"

Working pressure by Rules

191

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

3/4"

Back

5/8"

Top

5/8"

Bottom

3/4"

Pitch of stays to ditto: Sides

7 1/2" x 8 1/2"

Back

8 1/4" x 8 1/2"

Top

7 1/2" x 9"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

211

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

27/32

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

1 3/16"

Pitch of stays at wide water space

13 1/2" x 8 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

216

Main stays: Material

Steel

Tensile strength

28/32

Pitch of stays at body of stay

3" x 2 7/8"

No. of threads per inch

6

Area supported by each stay

22 1/2" x 15 1/2" x 22 1/2" x 15 1/2"

Working pressure by Rules

192

Screw stays: Material

Steel

Tensile strength

26/30

Pitch of stays at bottom of stay

15/8"

No. of threads per inch

9

Area supported by each stay

8 1/4" x 8 1/4"

004861-004865-0019

Lloyd's Register
Foundation

Working pressure by Rules 214 Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, or Over threads 1 3/4" ✓
No. of threads per inch 9 ✓ Area supported by each stay 10 1/16" x 8 1/8" Working pressure by Rules 210
Tubes: Material Iron ✓ External diameter { Plain 2 1/2" ✓ Stay 2 1/2" ✓ Thickness { 9 w.g. ✓ 5/16" 3/8" 1/2" ✓ No. of threads per inch 9 ✓
Pitch of tubes 3 3/4" x 3 3/4" ✓ Working pressure by Rules 230 Manhole compensation: Size of opening
shell plate 13" x 16 1/2" ✓ Section of compensating ring 13 3/8" x 1 9/16" ✓ No. of rivets and diameter of rivet holes 32 1 5/16" ✓
Outer row rivet pitch at ends 8 15/16" ✓ 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
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 none ✓ 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 as
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 RICHARDSONS, WESTGARTH & CO., LIMITED
S. D. Wright
DIRECTOR AND GENERAL MANAGER

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
See accompanying Machinery Report ✓

Survey Fee ... £ : : When applied for, 192
Travelling Expenses (if any) £ ✓ : : When received, 192

R. D. Shilston & Robert Rae.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 8 APR 1922.
Assigned See Pt. 1st attached