

REPORT ON BOILERS.

No. 29611

Received at London Office 17 JAN 1928

Date of writing Report

192

When handed in at Local Office

14 JAN. 1928

Port of Sunderland

No. in Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

1928

42028 on the

S. S. "NEWTON ABBOT"

(Number of Visits)

Gross

2689

Tons

Net

1614

Master

Built at

Sunderland

By whom built

J. Brown & Sons, Ltd

Yard No. 179

When built 1928

Engines made at

Sunderland

By whom made

North Eastern Marine Eng. Co. Ltd

Engine No. 2644

When made 1928

Boilers made at

Sunderland

By whom made

North Eastern Marine Eng. Co. Ltd

Boiler No. 2644

When made 1928

Nominal Horse Power

260

Owners

A. & C. Wilton.

Port belonging to

London

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

Manufacturers of Steel

David Colville and Sons Ltd

(Letter for Record)

(S)

Total Heating Surface of Boilers

4436 sq

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two - Marine type - Single ended. Corrugated furnaces. Working Pressure 180 lbs sq

Tested by hydraulic pressure to

320 lbs sq

Date of test

13-9-27

No. of Certificate

3956

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

58 sq

No. and Description of safety valves to each boiler

Two - Direct Spring loaded.

Area of each set of valves per boiler

(per Rule)

12.74 sq

as fitted

14.14 sq

Pressure to which they are adjusted

185 lbs sq

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers

4' 6"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2' 0"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

15' 3 1/2"

Length

10' 6" (FULL)

Shell plates: Material

Steel

Tensile strength

28 to 32 tons sq

Thickness

1 1/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D. R. Lap

long. seams

A. R. D. B. S.

Diameter of rivet holes in

circ. seams

1 3/32"

long. seams

1 9/32"

Pitch of rivets

3 3/4"

inter.

9 1/8"

Percentage of strength of circ. end seams

plate

65.8

rivets

45.2

Percentage of strength of circ. intermediate seam

plate

85.95

rivets

87.3

Percentage of strength of longitudinal joint

plate

85.95

rivets

87.3

combined

89.4

Working pressure of shell by Rules

180.1 lbs sq

Thickness of butt straps

(outer)

1"

No. and Description of Furnaces in each Boiler

3 - Corrugated Deighton type.

Material

Steel

Tensile strength

26 to 30 tons sq

Smallest outside diameter

3' 8 3/8"

Length of plain part

(top)

1"

Thickness of plates

(crown)

9/16"

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

183.8 lbs sq

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons sq

Thickness

1 9/32"

Pitch of stays

22 1/2" x 21"

How are stays secured

Double Nuts & Washers outside.

Working pressure by Rules

181.5 lbs sq

Tube plates: Material

(front)

Steel

Tensile strength

26 to 30 tons sq

Thickness

3/4"

(back)

7/8"

Mean pitch of stay tubes in nests

10.5"

Pitch across wide water spaces

14.5"

Working pressure

(front)

206 lbs sq (W.W. Space)

(back)

181.5 lbs sq

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons sq

Depth and thickness of girder

at centre

8 1/4" x 1 3/4"

Length as per Rule

30.5"

Distance apart

12"

No. and pitch of stays

in each

2 x 9 1/2"

Working pressure by Rules

183 lbs sq

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons sq

Thickness: Sides

25/32"

Back

25/32"

Top

25/32"

Bottom

15/16"

Pitch of stays to ditto: Sides

12" x 9 1/2"

Back

10 1/4" x 9"

Top

12" x 9 1/2"

Are stays fitted with nuts or riveted over

Fitted with nuts.

Working pressure by Rules

Sides 184 lbs sq

Tops 184 lbs sq

Back 182 lbs sq

Wings 11 1/2" x 10 1/4"

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons sq

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons sq

Thickness

7/8"

Pitch of stays at wide water space

14 3/4" x 10 1/4"

Are stays fitted with nuts or riveted over

Fitted with nuts

Working Pressure

194 lbs sq

Main stays: Material

Steel

Tensile strength

28 to 32 tons sq

Diameter

(At body of stay, or over threads)

3 1/8"

No. of threads per inch

6

Area supported by each stay

472.5 sq

Working pressure by Rules

181 lbs sq

Screw stays: Material

Steel

Tensile strength

26 to 30 tons sq

Diameter

(At turned off part, or over threads)

1 7/8"

No. of threads per inch

9

Area supported by each stay

Sides, Tops 114 sq

Wings, Backs 117.75 sq

Butts, Backs 92.25 sq

008344 - 008353 - 0183

Sides & Tops 187 lbs. □
 Working pressure by Rules 181 lbs. □ Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter { At turned off part, 2" ✓
 No. of threads per inch 9 Area supported by each stay 134.5 □ Working pressure by Rules 183.5 lbs. □
 Tubes: Material *Wrought Iron* ✓ External diameter { Plain 3 1/4" ✓ Thickness { 5/16" & 1/4" ✓ No. of threads per inch 9 ✓
 Pitch of tubes 4 9/16" x 4 9/16" ✓ Working pressure by Rules *Plain 230 lbs. □* Manhole compensation: Size of opening in
 end plate 16" x 12" ✓ Section of compensating ring *Stay 195 & 193 lbs. □* No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4" Steam Dome: Material
 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
 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
 Number of elements Material of tubes Steel castings
 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 THE NORTH EASTERN MARINE ENGINEERING CO. LD.

Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.
 The Boilers have been constructed under Special Survey, and satisfactorily fitted in the vessel.
 For notation see Machinery Report.

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

A. I. Griffiths.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 20 JAN 1928

Assigned

See Mch. Rpt. attached



© 2020

Lloyd's Register Foundation