

REPORT ON BOILERS.

No. 21748

28 DEC 1935 18 FEB 1936

Date of writing Report

1935

When handed in at Local Office

27 DEC. 1935

Port of

Received at London Office

Sunderland.

No. in Survey held at

Sunderland

Date, First Survey

Last Survey

Dec 23 1935

Reg. Book.

on the

Screw Steamer "FULHAM"

(Number of Visits

Tons } Gross
Net

Master

Built at

Bursledon

By whom built

Bursledon S.B. Co. Ld.

Yard No.

193.

When built

Engines made at

Sunderland

By whom made

North East Marine Eng. Co. Ld.

Engine No.

2829.

When made

1935.

Boilers made at

Sunderland

By whom made

North East Marine Eng. Co. Ld.

Boiler No.

2829.

When made

1935.

Nominal Horse Power

185

Owners

Fulham Borough Council.

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Ld.

(Letter for Record

Total Heating Surface of Boilers

2450 sq

Is forced draught fitted

Yes.

Coal or Oil fired

Coal.

No. and Description of Boilers

One Single Ended Multitubular

Working Pressure

200.

Tested by hydraulic pressure to

350

Date of test

27/11/35

No. of Certificate

4140

Can each boiler be worked separately

Area of Firegrate in each Boiler

59.26 sq

No. and Description of safety valves to each boiler

Two direct Spring.

Area of each set of valves per boiler

(per Rule

16.24 sq

as fitted

16.58 sq

Pressure to which they are adjusted

200 lbs

Are they fitted with easing gear

Yes

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

No

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

Open floors.

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-6 3/32"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

1 29/64"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. Lap.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

10 1/4"

Percentage of strength of circ. end seams

plate

65.4

rivets

44.4

Percentage of strength of circ. intermediate seam

plate

85.3

Percentage of strength of longitudinal joint

plate

85.3

rivets

84.8

combined

88.2

Working pressure of shell by Rules

202.

Thickness of butt straps

outer

1 1/8"

inner

1 1/4"

No. and Description of Furnaces in each Boiler

Three Corrugated (Leighton).

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-11 9/16"

Length of plain part

top

✓

Thickness of plates

crown

2 1/32"

Description of longitudinal joint

welded.

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

✓

Working pressure of furnace by Rules

201.8

End plates in steam space

Material

Steel

Tensile strength

26/30

Thickness

1 1/32"

Pitch of stays

2'-0" x 1'-4 1/4"

How are stays secured

Double nuts.

Working pressure by Rules

201.

Tube plates: Material

front

Steel

back

Tensile strength

26/30.

Thickness

15/16"

Working pressure

front

203

back

213.

Mean pitch of stay tubes in nests

10.53

Pitch across wide water spaces

14 1/2"

Working pressure

front

203

back

213.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32.

Depth and thickness of girder

at centre

9" x 2 1/8"

Length as per Rule

33.4"

Distance apart

11 1/2"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

209

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

3/4"

Back

25/32

Top

3/4"

Bottom

1"

Pitch of stays to ditto: Sides

10 1/2" x 9 3/8"

Back

10 1/2" x 9 1/8"

Top

11 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts.

Working pressure by Rules

200 206 202

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

15/16" (double 3/4" thick)

Lower back plate: Material

Steel

Tensile strength

26/30.

Thickness

29/32"

Pitch of stays at wide water space

1'-2 1/2"

Are stays fitted with nuts or riveted over

nuts.

Working Pressure

219.

Main stays: Material

Steel

Tensile strength

28/32.

Diameter

At body of stay,

3 3/8"

Over threads

3 1/2"

No. of threads per inch

6.

Area supported by each stay

2'-0" x 1'-4 1/4"

Working pressure by Rules

218.

Screw stays: Material

Sintered W.I.

Tensile strength

21 1/2 minimum.

Diameter

At turned off part,

1 1/8"

Over threads

No. of threads per inch

9.

Area supported by each stay

10 1/2" x 9 1/8"

002659-002666-0095

Lloyd's Register
Foundation

Working pressure by Rules **203.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter ^{At turned off part.} **2" 2 1/8"**
 No. of threads per inch **9.** Area supported by each stay **12 1/2" x 9 7/8", 12 1/2" x 11 1/4"** Working pressure by Rules **200 201.**
Laphuedia W.I. Tubes: Material **Laphuedia W.I.** External diameter ^{Plain} **3 1/4"** Thickness ^{8 WG.} **4 1/16" 3/8" 5/16"** No. of threads per inch **9.**
 Pitch of tubes **4 1/2" x 4 5/8"** Working pressure by Rules **Plain 230 Stay 208, 206, 242.** Manhole compensation: Size of opening
 shell plate **(End plate)** Section of compensating ring No. of rivets and diameter of rivet holes
 Outer row rivet pitch at ends Depth of flange if manhole flanged **4"** 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
 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}
 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 22 inclusive for boilers been complied with **Yes.**

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.
 Manufacturer

Dates of Survey ^{During progress of work in shops - -} **Please see Mech. Rpt.** Are the approved plans of boiler and superheater forwarded here **Yes.**
 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.)
 This boiler has been Constructed under Special Survey in accordance with the approved plan & the rules of the Society. (A plan showing additions to the approved plan is forwarded herewith.)
 The materials & workmanship are good.
 On Completion the boiler has been satisfactorily tested by hydraulic pressure in accordance with the Rules & found tight & sound.
 The boiler has been despatched to Buenos Aires for installation on board the vessel.
 This boiler has been efficiently fitted on board, examined under steam & safety valves adjusted 200 lbs. **B.R.**

Survey Fee ... **Changed a Mech. Rpt.** When applied for, 192
 Travelling Expenses (if any) ... When received, 192

J. H. Fraser.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 21 FEB 1936**
 Assigned **See minute on H.C. Rpt.** **FRI. 6 MAR 1936**