

REPORT ON BOILERS.

No. 31843

Received at London Office 19 JUN 1936

Date of writing Report

192

When handed in at Local Office

192

Port of

Sunderland

No. in Survey held at
g. Book.

Sunderland

Date, First Survey 1935 - Dec 11

Last Survey June 14 1936

on the

Screw Steamer "FULHAM II"

(Number of Visits 51)

Gross
Tons
Net

Master

Built at Bournemouth By whom built Bournemouth S. Bloke No. 194 When built

Engines made at

Sunderland

By whom made

South Eastern Mar. Eng. Co. Ltd.

Engine No.

2830

When made

1936

Boilers made at

Sunderland

By whom made

South Eastern Mar. Eng. Co. Ltd.

Boiler No.

280

When made

1936

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 Ltd.

(Letter for Record

✓

Total Heating Surface of Boilers

2750 sq. ft.

Is forced draught fitted

Yes.

Coal or Oil fired

Coal

Name and Description of Boilers

One Single Ended Multitubular

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test 13/3/36

No. of Certificate 4176

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

59.26 sq. ft.

No. and Description of safety valves to each boiler

Two direct spring

Area of each set of valves per boiler

(per Rule

16.27 sq. in.

as fitted 16.58 sq. in.

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

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

26/30.

Thickness

1/29/64"

Are the shell plates welded or flanged

no.

Description of riveting: circ. seams

end

DR. Lap

g. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

4 3/8"

10 1/4"

Percentage of strength of circ. end seams

plate

65.7

rivets

47.4

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.3

rivets

87.8

combined

88.2.

Working pressure of shell by Rules

202.1 lbs/10"

Thickness of butt straps

outer

1 1/8"

inner

1 1/4"

No. and Description of Furnaces in each Boiler

Three corrugated (Reighton)

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

3'-11 9/16"

Length of plain part

top

✓

bottom

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 lbs/10"

Plates in steam space: Material

Steel

Tensile strength

26/30.

Thickness

1 1/32"

Pitch of stays

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

Are stays secured

Double nuts

Working pressure by Rules

201. lbs/10"

Boiler plates: Material

front

Steel

back

Tensile strength

26/30.

Thickness

15/16"

13/16"

Minimum pitch of stay tubes in nests

10.53"

Pitch across wide water spaces

14 1/2"

Working pressure

front

203

back

213

Boilers to combustion chamber tops: Material

Steel

Tensile strength

28/32.

Depth and thickness of girder

Centre

9" x 2 1/8"

Length as per Rule

33.4"

Distance apart

11 1/2"

No. and pitch of stays

Each

3 at 8"

Working pressure by Rules

209.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

3/4"

Back

26/32"

Top

3/4"

Bottom

1"

Pitch of stays to ditto: Sides

10 1/2" x 9 3/8"

Back

10 1/2" x 9 7/8"

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

5/16"

(Double 3/4" thick)

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

24/32"

Pitch of stays at wide water space

1'-2 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

219 lbs/10"

Main stays: Material

Steel

Tensile strength

28/32

meter

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

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

Working pressure by Rules

218 lbs/10"

Screw stays: Material

Treated W.I.

Tensile strength

21 1/2 (Minimum)

meter

At turned off part,

or

Over threads

No. of threads per inch

9

Area supported by each stay

10 1/2" x 9 7/8"



Lloyd's Register Foundation

002620-002630-0058

Working pressure by Rules 203/160/15 Are the stays drilled at the outer ends ho. Margin stays: Diameter { At turned off part, 2; 3 2 1/8" Over threads 200 Mr. 201/160.

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 Mr. 201/160.

Tubes: Material Lapwelded W. Internal diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 8 W. G. 7/16, 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 in end plate 10" x 12" 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 -

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 22 inclusive for boilers been complied with Yes

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

Chas. F. Bay.

Dates of Survey { During progress of work in shops -- } 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

PLEASE SEE MACHINERY REPORT.

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

This boiler has been built under Special Survey and the materials and workmanship are good. On completion the boiler was securely fixed in the vessel, examined under steam, the safety valves adjusted to the working pressure and accumulators and satisfactorily carried out.

Your notation please re Machinery Report.

Survey Fee £ changed as Machy. Report When applied for, 192

Travelling Expenses (if any) £ : When received, 192

M. Caldwell.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 14 AUG 1936

Assigned See Lth. 26. 1914 FRI. 11 SEP 1936