

REPORT ON BOILERS.

No. 45811

See Glasgow Report

Received at London Office

14 JUL 1926

1 SEP 1926

Date of writing Report

192

When handed in at Local Office

9.7.1926

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

11.5.26

No Last Survey

5.7.26

192

(Number of Visits)

Gross

691

Tons

Net

311.

Master

Built at

Paisley

By whom built

John Fullerton & Co. Ltd

Yard No.

276

When built

1926

Engines made at

Glasgow

By whom made

Aitchison Blair Ltd

Engine No.

159

When made

1926

Boilers made at

Glasgow

By whom made

W. Rowan & Co. Ltd

Boiler No.

339

When made

1926

Nominal Horse Power

101.

Owners

H. Harrison (Shipping) Ltd

Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Gutehoffnungshütte A.G. of Oberhausen

(Letter for Record)

(S)

Total Heating Surface of Boilers

1853 sq ft

Is forced draught fitted

no

Coal or Oil fired

No. and Description of Boilers

one single ended marine

Working Pressure

180

Tested by hydraulic pressure to

320

Date of test

5.7.26

No. of Certificate

17168

Can each boiler be worked separately

-

Area of Firegrate in each Boiler

532 sq ft

No. and Description of safety valves to each boiler

2. Spring loaded

Area of each set of valves per boiler

per Rule

9.3 sq ft

as fitted

11.878 sq ft

Pressure to which they are adjusted

180 lbs

Are they fitted with easing gear

yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork

Well clear

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

Largest internal dia. of boilers

14'-0"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-30 tons

Thickness

1 5/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

long. seams

DBS. TR

Diameter of rivet holes in

circ. seams

1 3/16"

long. seams

1 1/4"

Pitch of rivets

3-24"

8 9/16"

Percentage of strength of circ. end seams

plate

63.3

rivets

48.7

Percentage of strength of circ. intermediate seam

plate

85.4

rivets

95.4

Percentage of strength of longitudinal joint

plate

85.4

rivets

95.4

combined

89.9

Working pressure of shell by Rules

180

Thickness of butt straps

outer

7/8"

inner

1"

No. and Description of Furnaces in each Boiler

Three Morrison corrugated

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

40"

Length of plain part

top

bottom

Thickness of plates

crown

1 1/2"

bottom

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

180

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 5/32"

Pitch of stays

14 1/2" x 19" & 18" x 19"

How are stays secured

DBS.

Working pressure by Rules

181

Tube plates: Material

Steel

Tensile strength

26-30 tons

Thickness

2 1/32"

2 3/32"

181

Mean pitch of stay tubes in nests

10"

Pitch across wide water spaces

13 1/8"

Working pressure

front

back

181

184

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-30 tons

Depth and thickness of girder

at centre

2 @ 7 1/2" x 7 1/8"

Length as per Rule

30.625

Distance apart

10 1/4"

No. and pitch of stays

in each

2 @ 9 3/4"

Working pressure by Rules

180

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

2 3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

2 3/32"

Are stays fitted with nuts or riveted over

nuts

Pitch of stays to ditto: Sides

9 3/4" x 10 1/4"

Back

8 1/2" x 9 1/4"

Top

9 3/4" x 10 1/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

190

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

2 1/32"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

3/4"

Pitch of stays at wide water space

13 1/8" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

186

Main stays: Material

Steel

Tensile strength

28-30 tons

Diameter

At body of stay,

2 3/4"

or

Over threads

No. of threads per inch

6

Area supported by each stay

342 sq in

Working pressure by Rules

191

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part,

1 5/8"

or

Over threads

No. of threads per inch

9

Area supported by each stay

78.6 sq in

Working pressure by Rules 194 Are the stays drilled at the outer ends *no* Margin stays: Diameter { At turned off part, or Over threads } 1 3/4" Working pressure by Rules 191

No. of threads per inch 9 Area supported by each stay 950" External diameter { Plain 3 1/4" Stay 3 1/4" Thickness { 9 W.G. 4 1/8" 5 3/8" 3 1/8" No. of threads per inch 9

Tubes: Material *Iron* Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 15 1/2" x 19 1/2" Section of compensating ring 7 1/4" x 1 5/8" No. of rivets and diameter of rivet holes 36 @ 1 1/4"

Outer row rivet pitch at ends 8 9/16" Depth of flange if manhole flanged 3" Steam Dome: Material *none*

Tensile strength *etc* Thickness of shell *etc* Description of longitudinal joint

Diameter of rivet holes *etc* Pitch of rivets *etc* Percentage of strength of joint { Plate Rivets } *etc*

Internal diameter *etc* Working pressure by Rules *etc* Thickness of crown *etc* No. and diameter of stays *etc* Inner radius of crown *etc* Working pressure by Rules *etc*

How connected to shell *etc* Size of doubling plate under dome *etc* Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell *etc*

Type of Superheater

Number of elements Material of tubes Manufacturers 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

The foregoing is a correct description,
for David Rowan & Co. Ltd.
Arch. W. Grierson Manufacturer.

Dates of Survey { During progress of work in shops - - - 1916 May 11-20-26 June 1-8-22. July 2-5. } 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 8

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

The workmanship and materials are good.

The boiler has been constructed under special survey, in accordance with the Rules

This boiler has been properly fitted on board and its safety valves adjusted under steam, washers P 9/32 S 9/32.

Survey Fee £ 12 : 8 : When applied for, 12. 7. 1926

Travelling Expenses (if any) £ : : When received, 16. 7. 1926

S. C. Davis & J. Y. Nicholas.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 13 JUL 1926

Assigned TRANSMIT TO LONDON

+ L.M.C.S. No on
Glas. Pt. 45920.