

REPORT ON BOILERS.

No. 30694

7 OCT 1931

Received at London Office 7 AUG 1931

Date of writing Report

192

When handed in at Local Office

6 AUG. 1931

Port of SUNDERLAND.

No. in
Reg. Book.

Survey held at

SUNDERLAND.

Date First Survey

Apr. 14

Last Survey

Aug 1

1931

on the

s/s "Lafonia"

(Number of Visits

24

Gross

Tons

Net

Master

Built at LEITH.

By whom built

H. ROBB LD.

Yard No.

189

When built

1931

Engines made at

By whom made

Engine No.

When made

Boilers made at

SUNDERLAND.

By whom made

MAC COLL & POLLOCK. LD.

Boiler No.

374

When made

1931

Nominal Horse Power

118.24.

Owners

Falkland Island Co Ltd

Port belonging to

Leith.

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

Manufacturers of Steel STEEL CO. OF SCOTLAND.

(Letter for Record (3))

Total Heating Surface of Boilers

2209 sq ft

Is forced draught fitted

No.

Coal or Oil fired

Coal.

No. and Description of Boilers

2 S.B.

Working Pressure 180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

3-7-31

No. of Certificate

4133

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

37.24 sq ft

No. and Description of safety valves to each boiler

2 Spring loaded

Area of each set of valves per boiler

(per Rule 7.062

as fitted 7.952

Pressure to which they are adjusted

185 lbs

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 or woodwork

2'-3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

12"

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

10'-9"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29/33 Tms.

Thickness

7/8"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. L.P.

long. seams

T.R. D. Butt Strap.

Diameter of rivet holes in

circ. seams

1 1/8"

long. seams

3/32"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate 70.63

rivets 44.2

Percentage of strength of circ. intermediate seam

plate

-

Percentage of strength of longitudinal joint

plate 85.9

rivets 90.8

combined 90.05.

Working pressure of shell by Rules

182.9 lbs.

Thickness of butt straps

outer 1/16"

inner 1/16"

No. and Description of Furnaces in each Boiler

2 horizontal, Dighton section.

Material

Steel

Tensile strength

26/30 Tms.

Smallest outside diameter

3'-2 1/4"

Length of plain part

top

-

Thickness of plates

crown

1/2"

Description of longitudinal joint

Weld.

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

Working pressure of furnace by Rules

188 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30 Tms.

Thickness

1 1/16"

Pitch of stays

14 1/2" x 15"

How are stays secured

Nuts inside & outside.

Working pressure by Rules

185 lbs.

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30 Tms.

Thickness

1 1/16"

2 3/32"

Mean pitch of stay tubes in nests

12" x 8"

Pitch across wide water spaces

13 1/2" x 8"

Working pressure

front 182.8 lbs.

back 183.8 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

29/33 Tms.

Depth and thickness of girder

at centre

6 1/2" x 3/4" (2 plates)

Length as per Rule

2'-4 3/8"

Distance apart

7 1/2"

No. and pitch of stays

in each

2 at 9"

Working pressure by Rules

180 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30 Tms.

Thickness: Sides

5/8"

Back

2 1/32"

Top

3/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

7 1/4" x 9"

Back

9" x 8 1/2"

Top

7 1/2" x 9"

Are stays fitted with nuts or riveted over

Nuts in. Caulked out.

Working pressure by Rules

188 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30 Tms.

Thickness

1 3/16"

Lower back plate: Material

Steel

Tensile strength

26/30 Tms.

Thickness

3/4"

Pitch of stays at wide water space

13 1/4" x 8 1/2"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

183.7 lbs.

Main stays: Material

Steel

Tensile strength

26/32 Tms.

Diameter

At body of stay,

or

Over threads

2 3/8"

No. of threads per inch

6"

Area supported by each stay

217 sq in.

Working pressure by Rules

181 lbs.

Screw stays: Material

Steel

Tensile strength

26/30 Tms.

Diameter

At turned off part,

or

Over threads

1 1/8"

No. of threads per inch

9

Area supported by each stay

76.5 sq in.

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Working pressure by Rules 198 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 1/2" ✓
Over threads
No. of threads per inch 9 Area supported by each stay 112 sq. Working pressure by Rules 192 lb.
Tubes: Material Steel External diameter { Plain 3" ✓
Stay 3" ✓ Thickness { 9 w.g. ✓
1/4" ✓ 7/16" ✓ No. of threads per inch 9
Pitch of tubes 4" x 4" ✓ Working pressure by Rules 210 lb 229 lb. Manhole compensation: Size of opening in
shell plate 16" x 12" ✓ Section of compensating ring 7/8" ✓ No. of rivets and diameter of rivet holes 32 at 3/32 ✓
Outer row rivet pitch at ends 6 3/8" ✓ Depth of flange if manhole flanged - Steam Dome: Material
Tensile strength Thickness of shell 409 H 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

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 82 S Working pressure as per
Rules Pressure to which the safety valves are adjusted 350 lb Hydraulic test pressure:
tubes, castings and after assembly in place 350 lb 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

The foregoing is a correct description,
PER PRO MACCOLL & POLLOCK LTD. Manufacturer.

Dates of Survey { During progress of work in shops - - - 21. Apr. 14. 17. 20. 23. May 5. 12. 15. 18. Are the approved plans of boiler and superheater forwarded herewith
while building { During erection on board vessel - - - 27. 29 June 4. 9. 11. 16. 18. 22. 30. July
1. 3. 7. 16. 24. 29. Aug. 1 (If not state date of approval.)
Total No. of visits 24

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

These Boilers have been built under Special Survey and are of good materials and workmanship. On completion they were tested hydraulically and found sound & tight.

It is stated that these boilers are to be fitted in vessel yard No 109 now building by H. R. & L. of Leith.

These boilers are in a good & efficient condition and will be shippable, in my opinion, to have the notation (with date) when satisfactorily fitted in the vessel and the safety valves adjusted.

These boilers have now been efficiently fitted on board, & their safety valves have been adjusted under steam.

John Houston
Leith. 27/10/31

Survey Fee ... £ 11: 16: 0 When applied for, - 6 AUG 1931
Travelling Expenses (if any) £ When received, 3-9- 1931.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 16 OCT 1931

Assigned

See J. E. Rpt.



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