

REPORT ON BOILERS.

No. 125849

27 AUG 1920

Received at London Office

Date of writing Report

10

When handed in at Local Office

10

Port of

Liverpool

No. in Reg. Book. Survey held at

Date, First Survey

Last Survey

19

90330 on the

S. S. "PAN"

(Number of Visits)

Gross
Tons
Net

Master

Built at

San Pedro, Cal.

By whom built

S. Western S. B. Co.

Yard No.

When built 1920

Engines made at

Los Angeles, Cal.

By whom made

Jewell & Son Work

Engine No.

When made 1920

Boilers made at

San Francisco

By whom made

Moore S B Co

Boiler No.

When made 1920

Nominal Horse Power

Owners

Amalgamated S. S. Co. Ltd.

Port belonging to

Panama

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Lukens Steel Co of Coatesville P.A. (60,000 T8)

(Letter for Record)

Total Heating Surface of Boilers

8112 ✓

Is forced draught fitted

Yes ✓

Coal or Oil fired

oil fired ✓

No. and Description of Boilers

3 ✓ Scotch single ended

Working Pressure

210 ✓

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Yes ✓

Area of Firegrate in each Boiler

O.F.

No. and Description of safety valves to each boiler

2 spring loaded.

Area of each set of valves per boiler

per Rule

as fitted 9.620 ✓

Pressure to which they are adjusted

210 lb

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

24"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

21"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14' - 9" ✓

Length

11' - 0" ✓

Shell plates: Material

Steel

Tensile strength

Thickness

1 9/16" ✓

Are the shell plates welded or flanged

Description of riveting: circ. seams

end

Double ✓

long. seams

Lukens O.B.S. ✓

Diameter of rivet holes in

circ. seams

1 13/32

Pitch of rivets

10" ✓

Percentage of strength of circ. end seams

plate

rivets

95 %

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

rivets

84.4 %

Working pressure of shell by Rules

240

Thickness of butt straps

outer

1 1/16"

Material

Steel

No. and Description of Furnaces in each Boiler

3 ✓ Morrison

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

235

End plates in steam space: Material

Steel

Tensile strength

Thickness

1 1/4" ✓

Pitch of stays

16 3/8 x 17 1/2 ✓

How are stays secured

Double nuts ✓

Working pressure by Rules

245

Tube plates: Material

front

Steel

back

Steel

Tensile strength

Thickness

1 13/16" ✓

1 1/16" + 1/16" double

Mean pitch of stay tubes in nests

12 3/8 x 8" ✓

Pitch across wide water spaces

13" ✓

Working pressure

front 230.

back

Girders to combustion chamber tops: Material

Steel

Tensile strength

Depth and thickness of girder

at centre

11" x 1 1/2" ✓

Length as per Rule

2' x 10" ✓

Distance apart

8 3/16" ✓

No. and pitch of stays

in each

4 2 1" ✓

Working pressure by Rules

285

Combustion chamber plates: Material

Steel

Tensile strength

Thickness: Sides

1 1/16" ✓

Back

1 1/16" ✓

Top

1 1/16" ✓

Bottom

1 1/16" ✓

Pitch of stays to ditto: Sides

7" x 8" ✓

Back

7 1/4" x 7 3/4" ✓

Top

7" x 8 3/16" ✓

Are stays fitted with nuts or riveted over

Riveted over

Working pressure by Rules

215

Front plate at bottom: Material

Steel

Tensile strength

Thickness

13/16" ✓

Lower back plate: Material

Steel

Tensile strength

Thickness

13/16" + 1/16" Double

Pitch of stays at wide water space

13" x 7" ✓

Are stays fitted with nuts or riveted over

Double nuts & washers

Working Pressure

310

Main stays: Material

Steel

Tensile strength

Diameter

At body of stay,

or

Over threads

No. of threads per inch

Area supported by each stay

287 sq"

Working pressure by Rules

300

Screw stays: Material

Steel

Tensile strength

Diameter

At turned off part,

or

Over threads

No. of threads per inch

Area supported by each stay

56 sq"

003083-003041-0154

Lloyd's Register
Foundation

Working pressure by Rules 245 Are the stays drilled at the outer ends Margin stays: Diameter { At turned off part, or Over threads }
No. of threads per inch Area supported by each stay Working pressure by Rules
Tubes: Material Steel External diameter { Plain 3 Stay 3 } Thickness { 148 1/4 } No. of threads per inch
Pitch of tubes 4 1/8" x 4" Working pressure by Rules Manhole compensation: Size of opening in
shell plate 16 x 12 Section of compensating ring none No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends Depth of flange if manhole flanged 3 3/4" 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 forgings 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 forgings and 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

The foregoing is a correct description,

Manufacturer

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - - }

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. Atlantic EX WEST CONSTANCE

New York Report No 23340

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

These boilers have not been built under Survey, but have now been examined with a view to classification.

The material & workmanship appear good. The scantlings checked as far as possible with the plan.

The boiler have been satisfactorily examined under steam, an accumulation test carried out, & their safety valves adjusted under steam to 210 lb/sq in

Fitted for oil fuel 1920 F.P. above 150°F.

3 SB. 210 lb/sq in 8112 sq ft H.S.

Survey Fee ... : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

L. H. Daggolt
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL 26 AUG 1946

Assigned See Minute on Dr. Machinery Report.