

REPORT ON BOILERS.

No. 16733.

Received at London Office

Date of writing Report

191

When handed in at Local Office

7.8. 1914 Port of Greenock

No. in Survey held at

Greenock

Date, First Survey

23. 6. 13

Last Survey

6/8/ 1914

Reg. Book.

on the SCREW STEAMER "DOGRA."

(Number of Visits

60.)

Gross

5738.

Tons

Net

3280.5.

Master L. A. Jones

Built at Port Glasgow

By whom built

Russell & Co. 1

When built

1914

Engines made at

Greenock

By whom made

Rankin & Blackmore

When made

1914

Boilers made at

Greenock

By whom made

Rankin & Blackmore

When made

1914

Registered Horse Power

442

Owners

Anatoli Sham Nav. Co. Ltd.

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel Glasgow Iron & Steel Coy. Ltd.

(Letter for record

Total Heating Surface of Boilers

1092 Sq. ft.

Is forced draft fitted

No.

No. and Description of

Boilers

1 Cylinder Mult. Single

Working Pressure

100 lb.

Tested by hydraulic pressure to

200 lb.

Date of test

10/6/14

No. of Certificate

1180

Can each boiler be worked separately

Area of fire grate in each boiler

32 Sq. ft.

No. and Description of

safety valves to each boiler

2 Direct Spring

Area of each valve

5.9 sq. in.

Pressure to which they are adjusted

105 lb.

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

1' 4"

Mean dia. of boilers

11' 0"

Length

10' 0"

Material of shell plates

Steel

Thickness

19/32

Range of tensile strength

28632 tons

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

Lap Double

Long. seams

Butt Strap

Diameter of rivet holes in long. seams

13/16

Pitch of rivets

4 1/16" 2 1/2"

Lap of plates or width of butt straps

8 3/4"

Per centages of strength of longitudinal joint

rivets 83.5

plate 82.6

Working pressure of shell by

rules

103 lb.

Size of manhole in shell

16" x 12"

Size of compensating ring

29 1/2" x 25 1/2" x 3/4"

No. and Description of Furnaces in each

boiler

2 Plain

Material

Steel

Outside diameter

37 1/8"

Length of plain part

top 44

bottom 44

Thickness of plates

crown 17/32

bottom 3/4"

Description of longitudinal joint

Butt Strap

No. of strengthening rings

None

Working pressure of furnace by the rules

108 lb.

Combustion chamber

plates: Material

Steel

Thickness: Sides

17/32

Back

9/16"

Top

19/32

Bottom

3/4"

Pitch of stays to ditto: Sides

8 1/2" x 10 1/2"

Back

10" x 10"

Top/24" x 8 1/2" If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

100 lb.

Material of stays

Steel

Diameter at

smallest part

1 3/8"

Area supported by each stay

108 sq. in.

Working pressure by rules

109 lb.

End plates in steam space: Material

Steel

Thickness

15/16"

Pitch of stays

19" x 21"

How are stays secured

Butt nuts

Working pressure by rules

99 lb.

Material of stays

Steel

Diameter at smallest part

2 3/8"

Area supported by each stay

399 sq. in.

Working pressure by rules

112 lb.

Material of Front plates at bottom

Steel

Thickness

5/8"

Material of

Lower back plate

Steel

Thickness

9/16"

Greatest pitch of stays

10"

Working pressure of plate by rules

109 lb.

Diameter of tubes

3 1/2"

Pitch of tubes

4 5/8" x 4 5/8"

Material of tube plates

Steel

Thickness: Front

5/8"

Back

3/4"

Mean pitch of stays

9 1/4"

Pitch across wide

water spaces

13 1/2"

Working pressures by rules

150 lb.

102 lb.

Girders to Chamber tops: Material

Steel

Depth and thickness of

girder at centre

7 1/4" x 1 1/2"

Length as per rule

28.7"

Distance apart

12 3/4"

Number and pitch of Stays in each

2: 8 1/2"

Working pressure by rules

114 lb.

Superheater or Steam chest: how connected to boiler

None

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

The foregoing is a correct description,

Rankin & Blackmore

Manufacturer.

Dates of Survey while building

During progress of work in shops - - -
During erection on board vessel - - -

See accompanying Machinery Report

Is the approved plan of boiler forwarded herewith

Total No. of visits

60.

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

This Boiler was built under special survey and the materials and workmanship are good.

For recommendations, see accompanying report.

Survey Fee ... £

When applied for, 191

Travelling Expenses (if any) £

When received, 191

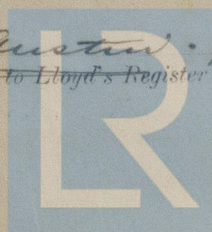
Committee's Minute

FRI. AUG. 14. 1914

Assigned

See minute on H. attached

Wm. R. Austin, Engineer-Surveyor to Lloyd's Register of British and Foreign Shipping.



Lloyd's Register Foundation

W661-0207

REPORT ON THE
DOCK

MULTITUBULAR BOILER
The boiler is a vertical cylindrical vessel of mild steel plate, 1/2 inch thick, with a diameter of 4 feet 6 inches. It is fitted with a single pass of tubes, 2 inches in diameter, 12 feet long, and 12 in number. The tubes are secured by a single nut and washer at each end. The boiler is supported by a cast iron base, and is fitted with a safety valve at the top. The boiler is in good condition, and is capable of withstanding a pressure of 150 lbs. per square inch.

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