

REPORT ON BOILERS.

No. 73843

THE NOV. 23 1920

Date of writing Report

191

When handed in at Local Office

191

Port of

Received at London Office
NEWCASTLE-ON-TYNE

No. in Survey held at

Reg. Book.

on the

S.S. ALFRED HARRISON

Date, First Survey March 8thLast Survey November 14th 1920.

(Number of Visits

19.)

Gross

518

Tons

Net

284

Master

Built at Wallsend

By whom built

Swan Hunter, Tugburn

Richardson & Co. Ltd. When built 1920

Engines made at

Coatbridge & B

By whom made

Wm Beardmore & Co. Ltd No 558 When made 1920

Boilers made at

Newcastle Type

By whom made

Swan Hunter, Tugburn Richardson & Co. Ltd 1149 When made 1920

Registered Horse Power

78

Owners

Harold Harrison

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel Spencer & Sons Ltd

(Letter for record S)

Total Heating Surface of Boilers 1415^{sq} ft

Is forced draft fitted No

No. and Description of

Boilers One S.E. Cylindrical Multi

Working Pressure 180^{lbs}Tested by hydraulic pressure to 360^{lbs}

Date of test 11. June 20

No. of Certificate 9421

Can each boiler be worked separately

Area of fire grate in each boiler 46.5^{sq} ft

No. and Description of

safety valves to each boiler 2 Direct Spring

Area of each valve 4.91^{sq} inPressure to which they are adjusted 185^{lbs} 23/7/20

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 11"

Mean dia. of boilers

12'-6"

Length 10'-6"

Material of shell plates

Steel

Thickness

31/32

Range of tensile strength 29/34^{tons}

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams

DR Lap

long. seams TR DB S

Diameter of rivet holes in long. seams 1"

Pitch of rivets 4"

Lap of plates or width of butt straps 15"

Per centages of strength of longitudinal joint

rivets 86.1%

Working pressure of shell by

rules 182^{lbs}

Size of manhole in shell 16" x 12"

Size of compensating ring 8 1/4 x 3 1/2"

No. and Description of Furnaces in each

boiler 3. Doughton

Material

Steel

Outside diameter 3'-1"

Length of plain part

top

bottom

Thickness of plates crown 15/32

bottom 32/32

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules 187^{lbs}

Combustion chamber

plates: Material

Steel

Thickness: Sides 21/32

Back 31/32

Top 31/32

Bottom 23/32

Pitch of stays to ditto: Sides 9 1/8 x 9"

Back 8 3/4 x 8 3/4"

Top 9 x 9"

If stays are fitted with nuts or riveted heads Nuts

Working pressure by rules 182^{lbs}

Material of stays

Steel

smallest part 2-03

Area supported by each stay 82 1/8^{sq} inWorking pressure by rules 190^{lbs}

End plates in steam space: Material

Steel

Thickness 1 1/8"

Pitch of stays 1 1/4 x 16"

How are stays secured DR & W

Working pressure by rules 183^{lbs}

Material of stays

Steel

Area at smallest part 5-05^{sq} inArea supported by each stay 276^{sq} inWorking pressure by rules 190^{lbs}

Material of Front plates at bottom

Steel

Thickness 31/32

Material of

Lower back plate

Steel

Thickness 15/16"

Greatest pitch of stays 1 1/4"

Working pressure of plate by rules 220^{lbs}

Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2 x 4 3/8"

Material of tube plates

Steel

Thickness: Front 31/32

Back 13/16"

Mean pitch of stays 1 1/8"

Pitch across wide

water spaces 1 1/4"

Working pressures by rules 189^{lbs}

Girders to Chamber tops: Material

Steel

Depth and thickness of

girder at centre 9 x 1 1/4"

Length as per rule 2'-8"

Distance apart 8"

Number and pitch of Stays in each

two of 9 7/8 pitch

Working pressure by rules 182^{lbs}

Steam dome: description of joint to shell

None

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

None

Date of Ap. roval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

FOR Pressure to which each is adjusted

Is Easing Gear fitted

SWAN, HUNTER & WIGHAM RICHARDSON, LTD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey

During progress of

work in shops

Mar. 8. 10. 25. Apr. 20. 23. 26. 28.

May. 3. 7. 21.

June. 9. 11.

Is the approved plan of boiler forwarded herewith

Yes

while

During erection on

board vessel

July. 14. 15. 20. 22. 23.

Nov. 16. 17.

Total No. of visits

19.

GENERAL REMARKS

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

The Boiler built under Special Survey the material and workmanship found good and efficient

The Boilers tested under 360^{lbs} hydraulic pressure and found satisfactory. The tubes fitted with the necessary mountings, fitted up on board the vessel, tested under steam & found satisfactory

Survey Fee

£

5.17

When applied for

22 NOV 1920

Travelling Expenses (if any)

£

When received,

24.12.20

Leonard & Shalleross

Engineer Surveyor to Lloyd's Register of Shipping.

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Lloyd's Register
Foundation

010584-010604-0048

In a Report also sent on the Hull of the Ship

(Im. 1.16.-Copyable Ink.)

RIFS NES



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