

Rpt. 5a.

REPORT ON BOILERS.

No. 76833

SAT. 23 JUN. 1923

Received at London Office

Date of writing Report

192

When handed in at Local Office

20/6/1923

Port of

NEWCASTLE-ON-TYNE

No. in
Reg. Book.

Survey held at

Newcastle

Date, First Survey

2nd Sept. 1921

Last Survey

19th June

1923

(Number of Visits)

Gross

Tons

Net

69051 on the

Steel Sc. OILFIELD

Master

Built at Newcastle

By whom built

Lynnhaven Shipbuilding Co. Ltd. Yard No. 224

When built 1923

Engines made at

Newcastle

By whom made

Wallend Shipway & Eng. Co. Ltd.

Engine No. 844

When made 1923

Boilers made at

Newcastle

By whom made

Wallend Shipway & Eng. Co. Ltd.

Boiler No. 844

When made 1923

Nominal Horse Power

467

Owners

Hudson Petroleum Tank S.S. Co. Ltd.

Port belonging to

Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

John Spencer & Sons Ltd.

(Letter for Record

S.)

Total Heating Surface of Boilers

5368 sq

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

Two S.E. byl. 2SB

Working Pressure

220 lbs

Tested by hydraulic pressure to

380 lbs

Date of test

23.11.21

No. of Certificate

9630

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

Oil fired

No. and Description of safety valves to each boiler

Two Spring-loaded

Area of each set of valves per boiler

per Rule

17.13 sq

as fitted

19.24 sq

Pressure to which they are adjusted

225 lbs

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

18"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

15'-9 1/2"

Length

11'-9"

Shell plates: Material

Steel

Tensile strength

30/34 sq

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

Double

long. seams

Tackle

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

4.534"

10 3/8"

Percentage of strength of circ. end seams

plate

66.2

rivets

42.3

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.2

rivets

87.0

combined

89.0

Working pressure of shell by Rules

221 lbs

Thickness of butt straps

outer

1 1/4"

inner

1 1/4"

No. and Description of Furnaces in each Boiler

3 Deighton

Material

Steel

Tensile strength

26/30 sq

Smallest outside diameter

46 1/8"

Length of plain part

top

bottom

Thickness of plates

crown

45"

bottom

64"

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

221 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30 sq

Thickness

1 3/8"

Pitch of stays

16 3/4" x 22 1/2"

How are stays secured

Double-nuts

Working pressure by Rules

235 lbs

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26/30 sq

Thickness

1 1/16"

13/16"

Mean pitch of stay tubes in nests

9'4"

Pitch across wide water spaces

14 3/4"

Working pressure

front

back

239 lbs

277 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32 sq

Depth and thickness of girder

at centre

10" x 1 1/2"

Length as per Rule

35 1/2"

Distance apart

8 1/2"

No. and pitch of stays

in each

3-8 3/8"

Working pressure by Rules

228 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30 sq

Thickness: Sides

1 1/16"

Back

2 1/32"

Top

1 1/16"

Bottom

1"

Pitch of stays to ditto: Sides

8 3/8" x 8 1/2"

Back

8 3/8" x 8 1/4"

Top

8 3/8" x 8 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

223 1/2 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30 sq

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26/30 sq

Thickness

29/32"

Pitch of stays at wide water space

15"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

230 lbs

Main stays: Material

Steel

Tensile strength

28/32 sq

Diameter

At body of stay,

or

Over threads

3 1/2"

No. of threads per inch

6

Area supported by each stay

376.875 sq

Working pressure by Rules

250 lbs

Screw stays: Material

Steel

Tensile strength

26/30 sq

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

75.375 sq

Lloyd's Register
Foundation
011294 - 011303 - 0080

Working pressure by Rules 24 1/2 Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, or Over threads 1 7/8"

No. of threads per inch 9 Area supported by each stay 9.75 sq" Working pressure by Rules 225 lbs

Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 1/8" 5/16" No. of threads per inch 9

Pitch of tubes 4" x 4" Working pressure by Rules 275 - 303 lbs Manhole compensation: Size of opening in shell plate 19" x 15" Section of compensating ring 36 1/4" x 1 1/4" No. of rivets and diameter of rivet holes 36 - 1 1/2"

Outer row rivet pitch at ends 10 7/8" Depth of flange if manhole flanged 2" Steam Dome: Material None

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 Schmidt Manufacturers of Tubes marine & locomotive Superheaters Ltd. Steel castings do.

Number of elements 116 Material of tubes S.A. Steel Internal diameter and thickness of tubes 15 1/2" x 2.5 mm

Material of headers Mild Steel Tensile strength 30 to 35 tons Thickness 1" Can the superheater be shut off and the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 1.76 sq" Are the safety valves fitted with easing gear Yes Working pressure as per Rules Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes 1000 lbs castings 660 lbs and after assembly in place 440 lbs Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with

FOR THE WALSLEY STEELWORKS & ENGINEERING CO. LIMITED
The foregoing is a correct description,
J. C. Henderson Manufacturer.
SECRETARY.

Dates of Survey { During progress of work in shops - - } See Machinery Report. 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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers were constructed under Special Survey. The materials and workmanship are sound and good. The Boilers were tested by hydraulic pressure with satisfactory results and the safety valves adjusted under steam. The Boilers have been efficiently installed and fastened.

Survey Fee £ See Machinery Report. When applied for, 192

Travelling Expenses (if any) £ See Report. When received, 192

R. Lee Amess.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 29 JUN 1923

Assigned

