

REPORT ON BOILERS.

No. 77502

Received at London Office

NEWCASTLE-ON-TYNE

Date of writing Report

192

When handed in at Local Office

26/1/1924 Port of

No. in Survey held at

Newcastle

Date, First Survey

22 March 1923

Last Survey

25 January 1924

Reg. Book.

(Number of Visits)

Tons

Gross

5230

Net

3320

40943 on the

Steel Se.

SNOWDON

Master

Built at Newcastle

By whom built Rathmumberland C.B. Co. Yard No. 383

When built 1924

Engines made at

Newcastle

By whom made Rath Eastern Marine Eng. Co. Ltd.

Engine No. 2541

When made 1924

Boilers made at

Newcastle

By whom made Rath Eastern Marine Eng. Co. Ltd.

Boiler No. 2541

When made 1924

Nominal Horse Power

381

Owners Sunnam S.S. Co. Ltd.

Port belonging to

Cardiff

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel John Pender & Sons Ltd. (Letter for Record S)

Total Heating Surface of Boilers

6330 sq ft

Is forced draught fitted

No.

Coal or Oil fired

Coal

No. and Description of Boilers

Three Single End Cylindrical

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

7 Sept 1923

No. of Certificate

9780

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

50 sq ft

No. and Description of safety valves to each boiler

Two Spring loaded

Area of each set of valves per boiler

per Rule

13.5 sq ft

as fitted

14.12 sq ft

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

Smallest distance between boilers or uptakes and bunkers or woodwork

3'0"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

30"

Is the bottom of the boiler insulated

No

Largest internal dia. of boilers

14' - 3 1/2"

Length

11' - 0"

Shell plates: Material

Steel

Tensile strength

28 1/2 x 32 1/2

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

Double

Long. seams

Stitch

Diameter of rivet holes in

circ. seams

1 1/4"

long. seams

1 1/2"

Pitch of rivets

3 3/8"

8 9/16"

Percentage of strength of circ. end seams

plate

61

rivets

43

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.7

rivets

89.1

combined

89.3

Working pressure of shell by Rules

181 lbs

Thickness of butt straps

outer

7/8"

inner

1"

No. and Description of Furnaces in each Boiler

Three Weighton

Material

Steel

Tensile strength

26/30

Smallest outside diameter

39 3/4"

Length of plain part

top

bottom

Thickness of plates

crown

1/2"

Description of longitudinal joint

weld

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

None

Working pressure of furnace by Rules

181 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1 1/2"

Pitch of stays

20 1/2" x 2 1/2"

How are stays secured

Double nuts & washers

Working pressure by Rules

181 lbs

Tube plates: Material

front

Steel

Tensile strength

26

Thickness

15/16"

Mean pitch of stay tubes in nests

9 1/8"

Pitch across wide water spaces

14 1/2"

Working pressure

front

218

back

241

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

9" x 1 1/2"

Length as per Rule

32"

Distance apart

10 3/4"

No. and pitch of stays

in each

Two - 9"

Working pressure by Rules

182 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

23/32

Back

23/32

Top

23/32

Bottom

15/16"

Pitch of stays to ditto: Sides

10 1/2" x 9"

Back

10 1/2" x 9 1/2"

Top

10 3/4" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 lbs

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

197 lbs

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay,

or

Over threads

No. of threads per inch

6

Area supported by each stay

512.5 sq in

Working pressure by Rules

181 lbs

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part,

or

Over threads

No. of threads per inch

9

Area supported by each stay

99.75 sq in

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Working pressure by Rules 182 lb Are the stays drilled at the outer ends *no* ✓ Margin stays: Diameter { At turned off part, 2" ✓
No. of threads per inch 9 ✓ Area supported by each stay 137.750" Working pressure by Rules 180 lb
Tubes: Material *iron* ✓ External diameter { Plain 3 1/4" ✓ Thickness { 5/16" 1/4" ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 5/8" x 4 1/2" ✓ Working pressure by Rules 198 lb Manhole compensation: Size of opening
end plate 16" x 12" ✓ Section of compensating ring *flanged* ✓ No. of rivets and diameter of rivet holes
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 3 1/4" ✓ Steam Dome: Material *iron* ✓
Tensile strength Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate
Internal diameter Working pressure by Rules Thickness of crown No. and diameter of rivets
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 *none* Manufacturers of { Tubes
Number of elements Material of tubes Steel castings
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, 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 23 inclusive for boilers been complied with *Yes* ✓

The foregoing is a correct description, *See Machinery Report* ✓

Dates of Survey { During progress of work in shops - - } *See Machinery Report* Are the approved plans of boiler and superheater forwarded herewith
while building { During erection on board vessel - - - } (If not state date of approval.)
Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The Boilers have been constructed under Special Survey. The materials and workmanship are sound and good. The Boilers were tested by hydraulic pressure, they were efficiently installed in the vessel and the safety valves adjusted under steam. In my opinion they are eligible for a classed vessel.*

Survey Fee *See Mch. Report* When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

See Annex.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *FRI FEB 18 1904*

Assigned

FRI FEB 15 1904

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