

REPORT ON BOILERS.

No. 81315

Date of writing Report

1927

When handed in at Local Office

May 6th 1927

Received at London Office

9 MAY 1927

No. in Reg. Book

Survey held at

Wallsend-on-Tyne

Port of

Newcastle-on-Tyne

Date, First Survey

27 Jan

Last Survey

5 May

1927

on the New Steel S.S. Windsolite

(Number of Visits)

Gross Tons

Net

Master

Built at

Hawerton Hill-on-Tees

By whom built

Yarness Shipbuilding Co

Yard No. 115

When built

1924

Engines made at

Wallsend-on-Tyne

By whom made

North Eastern Marine & Cy Ltd

Engine No. 2632

When made

1924

Boiler made at

ditto

By whom made

ditto

Boiler No. 2632

When made

1924

Nominal Horse Power

158

Owners

Imperial Oil Co

Port belonging to

Windsor Ontario

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wm Beardmore & Sons, Steel Coy of Scotland Ltd

Total Heating Surface of Boilers

2418 sq ft

No. and Description of Boilers

One Single Ended

Is forced draught fitted

No

(Letter for Record)

P

Tested by hydraulic pressure to

320 lbs

Date of test

30-3-27

No. of Certificate

135

Working Pressure

180 lbs

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

21.2 sq in

as fitted

22.08 sq in

Pressure to which they are adjusted

185 lbs

Can each boiler be worked separately

✓

Area of each set of valves per boiler

(per Rule)

21.2 sq in

as fitted

22.08 sq in

2 Spring loaded

✓

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

6-0

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

1-8

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

15-9 1/2

Length

11-6

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 3/8

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

D.R.

inter.

3 3/4

9 5/16

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 5/16

long. seams

1 5/16

Pitch of rivets

3 3/4

9 5/16

Percentage of strength of circ. end seams

plate

65.0

rivets

46.4

Percentage of strength of circ. intermediate seam

plate

85.9

rivets

84.3

Percentage of strength of longitudinal joint

plate

85.9

rivets

84.3

combined

89.3

Working pressure of shell by Rules

180 lbs

Thickness of butt straps

outer

1 1/8

inner

1 3/8

Material

Steel

No. and Description of Furnaces in each Boiler

4 cf

Corrugated

Tensile strength

26-30 tons

Smallest outside diameter

3'-2 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

1 1/2

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

188 lbs

Thickness

1 1/16

Pitch of stays

1-11 x 1-11

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/16

Pitch of stays

1-11 x 1-11

How are stays secured

Double nuts

Tensile strength

26-30 tons

Thickness

1 1/16

Pitch of stays

1-11 x 1-11

Tube plates: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/16

Pitch of stays

1-11 x 1-11

Lean pitch of stay tubes in nests

8 3/4 x 9

Pitch across wide water spaces

1-2 1/2 x 8 3/4

Working pressure

front

184 lbs

back

255 lbs

Orders to combustion chamber tops: Material

Steel

Tensile strength

28-30 tons

Thickness

1 1/2

Distance apart

11 1/2

centre

2 @ 8" x 3 1/4"

Length as per Rule

24"

Working pressure by Rules

201 lbs

Thickness: Sides

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

each

2 @ 8 3/4"

Working pressure by Rules

190 lbs

Thickness: Sides

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

Tensile strength

26-30 tons

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

1"

1"

1"

Pitch of stays to ditto: Sides

3 1/4 x 9

Back

3 1/4 x 9

Top

11 1/2 x 8 3/4

Are stays fitted with nuts or riveted over

riveted

Tensile strength

26-30 tons

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Working pressure by Rules

190 lbs

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

1"

1"

1"

1"

1"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

1"

1"

1"

Pitch of stays at wide water space

14 1/2 x 4 5/8

Working pressure

233 lbs

Main stays: Material

Steel

Tensile strength

28-30 tons

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

Working pressure by Rules

190 lbs

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

1"

1"

1"

1"

1"

Pitch of stays at wide water space

14 1/2 x 4 5/8

Working pressure

233 lbs

Main stays: Material

Steel

Tensile strength

28-30 tons

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

Working pressure by Rules

190 lbs

Thickness

3 1/4"

Back

3 1/4"

Top

3 1/4"

Bottom

1"

1"

1"

1"

1"

1"

1"

Pitch of stays at wide water space

14 1/2 x 4 5/8

Working pressure

233 lbs

Main stays: Material

Steel

Tensile strength

28-30

Working pressure by Rules 180.5 lbs. Are the stays drilled at the outer ends yes Margin stays: Diameter { At turned off part, 1 1/16" or Over threads 1 1/8" }
 No. of threads per inch 9 Area supported by each stay 14 1/2" x 4 5/8" Working pressure by Rules 193 lbs.
 Tubes: Material W Iron External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness 1/4 - 5/16 - 3/8 No. of threads per inch 9
 Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 209 lbs Manhole compensation: Size of opening
 shell plate 14 5/8" x 15 5/8" Section of compensating ring 8 - x 15 1/16" No. of rivets and diameter of rivet holes 32 @ 1 1/2"
 Outer row rivet pitch at ends 10 3/4" Depth of flange if manhole flanged 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 Rivets }
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter
 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 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
 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
 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

FOR THE NORTH EASTERN MARINE ENGINEERING CO., LD.
 The foregoing is a correct description,
 G. H. Stephens
 Commercial Manager

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

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

This Boiler has been built under Special Survey. Materials - Workmanship good. Hydraulic test satisfactory. It is securely fixed in the vessel & its safety valves have been adjusted under steam.

Survey Fee ... £ : ✓ : When applied for, 192
 Travelling Expenses (if any) £ : ✓ : When received, 192

William Butler
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUES. 17 MAY 77

Assigned

See J.E. rpt attached



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