

REPORT ON BOILERS.

No. 85466

Received at London Office 18 MAR 1930

Date of writing Report

19

When handed in at Local Office

14/3/10 30

Port of Newcastle-on-Tyne

No. in Reg. Book. Survey held at

Wallsend-on-Tyne

Date First Survey

16 July 129

Last Survey

4 March 1930

on the

New Steel S.S. "Marathon"

(Number of Visits)

Gross 7208

Tons

Net 4358

Master

Built at

Wallsend

By whom built

Swanley & Co. Ltd

Yard No. 1421

When built 1930

Engines made at

Wallsend-on-Tyne

By whom made

Wallsend Slipways & Co. Ltd

Engine No. 898

When made 1930

Boilers made at

Wallsend-on-Tyne

By whom made

Wallsend Slipways & Co. Ltd

Boiler No. 898

When made 1930

Nominal Horse Power

605

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel

Steel Company of Scotland Ltd.

(Letter for Record S.)

Total Heating Surface of Boilers

9186 sq ft

Is forced draught fitted Yes

Coal or Oil fired oil

No. and Description of Boilers

Three single ended

Working Pressure 180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

9-12-29

No. of Certificate

H 11

Can each boiler be worked separately Yes

Area of Firegrate in each Boiler

45 sq ft

No. and Description of safety valves to each boiler

Two spring loaded high lift

Area of each set of valves per boiler

per Rule

as fitted

14.14

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~~ uptakes and bunkers or ~~woodwork~~

2'-0"

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

16'-6 1/4"

Length

12'-0"

Shell plates: Material

Steel

Tensile strength

30 to 34 tons

Thickness

1 3/8"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/8"

Pitch of rivets

3/4" 9/16"

Percentage of strength of circ. end seams

plate

rivets

65.4

Percentage of strength of circ. intermediate seam

plate

rivets

Yes

Percentage of strength of longitudinal joint

plate

rivets

85.4

combined

88.8

Working pressure of shell by Rules

182.5 lbs.

Thickness of butt straps

outer

3/32"

inner

1/32"

No. and Description of Furnaces in each Boiler

4 Corrugated (Deighton)

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-5 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

1 1/8"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

186.1 lbs

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/4"

Pitch of stays

14 x 22

How are stays secured

D. nuts.

Working pressure by Rules

189 lbs

Tube plates: Material

front

back

Steel

Tensile strength

26 to 30 tons

Thickness

15/16 x 1 1/4"

Mean pitch of stay tubes in nests

13 1/4 x 10 1/8"

Pitch across wide water spaces

13 1/4 x 1 1/4"

Working pressure

front 198 lbs

back 229 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre

2 @ 3/4 x 8"

Length as per Rule

2'-11"

Distance apart

1 1/2"

No. and pitch of stays

in each

2 @ 11"

Working pressure by Rules

181 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

1/16"

Back

2 1/32"

Top

1/16"

Bottom

1/16"

Pitch of stays to ditto: Sides

11 x 1 1/8"

Back

8 1/8 x 8 1/8"

Top

11 x 1 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

182.5 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/8"

Pitch of stays at wide water space

13 1/4 x 8 1/8"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

245 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter: At body of stay,

or

Over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

3 1/4 sq ft

Working pressure by Rules

215 lbs.

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter: At turned off part,

or

Over threads

1 5/8"

No. of threads per inch

9

Area supported by each stay

82.5 sq ft

002498-002505-0058

Working pressure by Rules 184 lbs. Are the stays drilled at the outer ends ho Margin stays: Diameter { At turned off part, 1 1/4" or Over threads 186 lbs. No. of threads per inch 9 Area supported by each stay 98.2 sq" Working pressure by Rules 186 lbs. Tubes: Material W. Iron. External diameter { Plain 2 1/2" Stay 2 1/2" Thickness 5/16 + 3/8" No. of threads per inch 9. Pitch of tubes 3 3/4 x 3 1/8, 3 1/8 x 3 1/8 Working pressure by Rules 191 lbs. Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 21 1/4" x 1 9/32" No. of rivets and diameter of rivet holes 42 @ 1 1/32" Outer row rivet pitch at ends 9 1/4" Depth of flange if manhole flanged 3 9/32" 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 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 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 22 inclusive for boilers been complied with Yes.

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

Signature of Director

Dates of Survey { During progress of work in shops - - - while building { During erection on board vessel - - -

See Indy Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.

Total No. of visits

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

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

These Boilers have been built under Special Survey, Materials & Workmanship good. Hydraulic test satisfactory. Examined under steam & Safety valves adjusted.

Survey Fee ... £ : : When applied for, 19 Travelling Expenses (if any) £ : : When received, 19

Signature of William Butler

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 28 MAR 1930

Assigned See other 3E Rpt.

