

REPORT ON BOILERS.

No. 85288

Date of writing Report

192

When handed in at Local Office

4/2/1930

Port of

Received at London Office

6 FEB 1930

NEWCASTLE-ON-TYNE

No. in
Reg. Book.

on the

Wallsend-on-Tyne

Date, First Survey

4 Nov 129

Last Survey

3 Feb

1930

(Number of Visits

Gross

2780

Tons

1579

Master

Built at

Hebburn

By whom built

Hawthorne Leslie & Co. Ltd.

Yard No. 570

When built

1930

Engines made at

Wallsend

By whom made

North Eastern Marine & Co. Ltd.

Engine No. 2738

When made

1930

Boilers made at

Wallsend.

By whom made

North Eastern Marine & Co. Ltd.

Boiler No. 2738

When made

1930

Nominal Horse Power

219.

Owners

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Ltd.

(Letter for Record

S.

Total Heating Surface of Boilers

3500 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

Two single ended.

Working Pressure

200 lbs

Tested by hydraulic pressure to

350

Date of test

31-12-29

No. of Certificate

417

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

44 sq ft

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule

10.8

Pressure to which they are adjusted

205 lbs

Are they fitted with easing gear

Yes

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

3'-6"

Is oil fuel carried in the double bottom under boilers

No

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

13'-9 9/16"

Length

10'-3"

Shell plates: Material

Steel

Tensile strength

29 to 33 tons

Thickness

1 1/8"

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 1/4"

Pitch of rivets

3 3/4"

8 1/16"

Percentage of strength of circ. end seams

plate

66.6

rivets

47.6

Percentage of strength of circ. intermediate seam

plate

85.6

rivets

86.7

Percentage of strength of longitudinal joint

plate

85.6

rivets

86.7

combined

90

Working pressure of shell by Rules

201.7

Thickness of butt straps

outer

15/16"

inner

1 1/16"

No. and Description of Furnaces in each Boiler

3 corrugated (Dayton)

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-2 1/4"

Length of plain part

top

bottom

1 1/2"

Thickness of plates

crown

1 1/2"

bottom

1 3/8"

Description of longitudinal joint

weld

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

none

Working pressure of furnace by Rules

200.5 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 5/16"

Pitch of stays

1-6 x 1-8

How are stays secured

Double nuts

Working pressure by Rules

202 lbs

Tube plates: Material

front

back

Steel

Tensile strength

26 to 30 tons

Thickness

1"

26/32"

208 lbs

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

14 1/2" x 9"

Working pressure

front

203 lbs

back

Girders to combustion chamber tops: Material

Steel

Tensile strength

29 to 33 tons

Depth and thickness of girder

at centre

2 @ 34" x 8 1/2"

Length as per Rule

2'-6 1/2"

Distance apart

10"

No. and pitch of stays

in each

2 @ 9"

Working pressure by Rules

206 lbs

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

Pitch of stays to ditto: Sides

9 x 10"

Back

9 x 9"

Top

9 x 10"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

200.5 lbs

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

7/8"

Pitch of stays at wide water space

14 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

208 lbs

Main stays: Material

Steel

Tensile strength

26 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

360 sq in

Working pressure by Rules

217 lbs

Screw stays: Material

Steel

Tensile strength

26 to 30 tons

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

90 sq in

Lloyd's Register

Foundation

Working pressure by Rules 201.5 lbs Are the stays drilled at the outer ends No Margin stays: Diameter 2" ^{At turned off part,}
 No. of threads per inch 9 Area supported by each stay 114 sq" ^{or} Working pressure by Rules 217 lbs ^{Over threads}
 Tubes: Material Steel External diameter 3 1/4" Thickness 8 L.S.G. No. of threads per inch 9
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules N.W.S. 201 lbs. Manhole compensation: Size of opening in
 shell plate 20 1/2" x 16 1/2" Section of compensating ring 12 1/4" x 1 1/4" No. of rivets and diameter of rivet holes 32 @ 1 1/2"
 Outer row rivet pitch at ends 10 1/2" Depth of flange if manhole flanged 4" 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
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ Rivets _____
 stays _____ Inner radius of crown _____ Working pressure by Rules _____ No. and diameter of
 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 _____ Internal diameter and thickness of tubes _____
 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.

The foregoing is a correct description,

W. H. B. ENGINEERING CO. LTD. Manufacturer.

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

See Machinery Report

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

Total No. of visits _____

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

These Boilers have been built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory. They are efficiently installed & fixed in the vessel & have been examined under steam & safety valves adjusted.

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 TUE. 11 FEB 1930

Assigned

See F.E. Rep.



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