

REPORT ON BOILERS.

No. 14042

22 APR 1930

Received at London Office

Date of writing Report

16.4.30

When handed in at Local Office

16.4.30

Port of MIDDLESBROUGH.

No. in Survey held at
Reg. Book.

STOCKTON.

Date, First Survey

5 February

Last Survey

16.4.1930.

on the

Boiler for Messrs. Plenty & Son.

T.S. TUG.

SUPERIOR

(Number of Visits) 14

Tons

Gross 255.42

Net

Master

Built at

Selby

By whom built

Cochran & Sons

Yard No. 1080

When built

1930

Engines made at

Leedsbury

By whom made

Plenty & Son Ltd

Engine No. 2041

When made

1930

Boiler made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd

Boiler No. 5985

When made

1930.

Nominal Horse Power

Owners

Aquatic Navigation
(Messrs. Buchanan & Co)

Port belonging to

Queen Mary.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Appleby Iron Co.

(Letter for Record S.)

Total Heating Surface of Boilers

1650 sq. ft. ✓

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

15B.

Working Pressure 190 lbs. ✓

Tested by hydraulic pressure to

335 lbs. ✓

Date of test

16.4.30

No. of Certificate

6777.

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

53 sq. ft. ✓

No. and Description of safety valves to each boiler

Two spring-loaded

Area of each set of valves per boiler

per Rule

10.85 sq. ft.

Pressure to which they are adjusted

190 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

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

✓

Largest internal dia. of boilers

13'-3 3/4" ✓

Length

10'-6" ✓

Shell plates: Material

Steel ✓

Tensile strength

29/33 ✓

Thickness

1 1/8" ✓

Are the shell plates welded or flanged

No ✓

Description of riveting: circ. seams

end

DR. ✓

long. seams

T.R.D.B.S. (5 rivets)

Diameter of rivet holes in

circ. seams

1 7/32" ✓

long. seams

1 3/16" ✓

Pitch of rivets

3 1/2" ✓

8 3/8" ✓

Percentage of strength of circ. end seams

plate

65.2

rivets

47.1

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.8

rivets

87.4

combined

89.0

Working pressure of shell by Rules

192 lbs. ✓

Thickness of butt straps

outer

27" ✓

inner

31" ✓

No. and Description of Furnaces in each Boiler

3 CF. ✓

Material

Steel ✓

Tensile strength

26/30. ✓

Smallest outside diameter

3'-3 3/16" ✓

Length of plain part

top

✓

bottom

✓

Thickness of plates

crown

17" ✓

bottom

32" ✓

Description of longitudinal joint

Weld. ✓

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

✓

Working pressure of furnace by Rules

195 lbs. ✓

End plates in steam space: Material

Steel ✓

Tensile strength

26/30. ✓

Thickness

1 1/2" ✓

Pitch of stays

19" x 16" ✓

How are stays secured

D.N. & W. ✓

Working pressure by Rules

192 lbs. ✓

Tube plates: Material

front

Steel ✓

back

✓

Tensile strength

26/30. ✓

Thickness

29/32 ✓

13/16" ✓

Mean pitch of stay tubes in nests

10 3/16" ✓

Pitch across wide water spaces

14 3/4" x 8 1/2" ✓

Working pressure

front

194 lbs. ✓

back

228 " ✓

Girders to combustion chamber tops: Material

Steel ✓

Tensile strength

28/32 ✓

Depth and thickness of girder

at centre

9 x 1/4" (double) ✓

Length as per Rule

2'-6" ✓

Distance apart

11" ✓

No. and pitch of stays

in each

3-7" ✓

Working pressure by Rules

190 lbs. ✓

Combustion chamber plates: Material

Steel ✓

Tensile strength

26/30. ✓

Thickness: Sides

11" ✓

Back

21" ✓

Top

11" ✓

Bottom

11" ✓

Pitch of stays to ditto: Sides

10 1/2" x 7" ✓

Back

9" x 8 1/2" ✓

Top

11" x 7" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

194 lbs. ✓

Front plate at bottom: Material

Steel ✓

Tensile strength

26/30. ✓

Thickness

29" ✓

Lower back plate: Material

Steel ✓

Tensile strength

26/30. ✓

Thickness

27" ✓

32" ✓

Pitch of stays at wide water space

14 3/4" x 9" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

194 lbs. ✓

Main stays: Material

Steel ✓

Tensile strength

28/32. ✓

Diameter

At body of stay,

or

2 7/8" ✓

Over threads

✓

No. of threads per inch

6. ✓

Area supported by each stay

297.5 sq. ✓

Working pressure by Rules

205 lbs. ✓

Screw stays: Material

Steel ✓

Tensile strength

26/30. ✓

Diameter

At turned off part,

or

1 7/8" ✓

Over threads

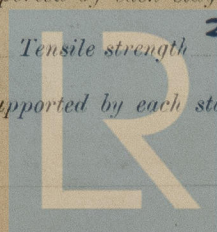
✓

No. of threads per inch

9. ✓

Area supported by each stay

75 sq. ✓

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Foundation

011947-011954-0232

Working pressure by Rules 202 lbs. Are the stays drilled at the outer ends 40. Margin stays: Diameter { At turned off part, or Over threads 1 7/8" ✓
No. of threads per inch 9. Area supported by each stay 101 sq. Working pressure by Rules 211 lbs.
Tubes: Material Lion External diameter { Plain 3 1/4" 16 3/16" ✓ Thickness { 8 wgs. ✓ No. of threads per inch 9. ✓
Pitch of tubes 4 1/4" x 4 1/2" ✓ Working pressure by Rules p. 230 lbs. s. 197 lbs. Manhole compensation: Size of opening in shell plate 20" x 16" ✓ Section of compensating ring 9" x 18" ✓ No. of rivets and diameter of rivet holes 44 - 1 1/2" ✓
Outer row rivet pitch at ends 9" ✓ Depth of flange if manhole flanged Steam Dome: Material
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
How connected to shell Inner radius of crown Working pressure by Rules
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 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 casing 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

Ye
The foregoing is a correct description,
J. H. Shields Secretary, Manufacturer.

Dates of Survey { During progress of work in shops - - 1930: Feb. 5, 12, 19, 24, Mar. 4, 6, 12, 19
while building { During erection on board vessel - - 25, 28 Apr. 1, 8, 11, 16
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Ye
Total No. of visits 14

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

The materials and workmanship are good.
This boiler has been built under special survey in accordance with the Rules and Approved Plan.
It will be installed in the Hull district

This boiler has been satisfactorily fitted on board, tried under steam, and its safety valves adjusted as above.

Shut & Mackenzie.

Survey Fee ... £ 11-0-0 When applied for, Monthly
Travelling Expenses (if any) £ : : When received, 192

M. Man.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 25 JUL 1930

Assigned

See Hull GE 41041



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