

REPORT ON BOILERS.

Sld. No. 29024
Moly. No. 122212

24 JAN 1925

Received at London Office

24 JAN 1925

No. of writing Report

192

When handed in at Local Office

22/1/

192

Port of

Middlesbrough

To. in Survey held at

Stockton-on-Tees

Date, First Survey

15th Sept 1924

Last Survey

20-1-1925

296 on the

S/S "Peterston"

(Number of Visits

Sailing

Exp.

Tons

Gross

Net

4680

2797

ster

✓

Built at

Aunduland

By whom built

Bartram & Co Ltd

Yard No. 258

When built 1925

ines made at

Stockton

By whom made

Jimm Blair & Co Ltd

Engine No. 1962

When made 1925

lers made at

Stockton

By whom made

Jimm Blair & Co Ltd

Boiler No. 1962

When made 1925

ninal Horse Power

451

Owners

Clangore S.S. Co. Ltd.

Port belonging to

London.

E. Thomas Radcliffe & Co

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY

Manufacturers of Steel

Jimm D. Colville & Sons ✓

(Letter for Record (S) ✓)

Heating Surface of Boilers

7650 ✓

Is forced draught fitted

no ✓

Coal or Oil fired

coal ✓

and Description of Boilers

3 single ended ✓

Working Pressure

180 lb ✓

ed by hydraulic pressure to

320 lb ✓

Date of test

18-12-24 ✓

No. of Certificate

6423 ✓

Can each boiler be worked separately

yes ✓

of Firegrate in each Boiler

64.8 ✓

No. and Description of safety valves to each boiler

2 direct Spring High Lift ✓

of each set of valves per boiler

per Rule

10.89 ✓

as fitted

11.88 ✓

Pressure to which they are adjusted

185 lb ✓

Are they fitted with easing gear

yes ✓

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

✓

Least distance between boilers or uptakes and bunkers or woodwork

3'-8" ✓

Is oil fuel carried in the double bottom under boilers

no ✓

Least distance between shell of boiler and tank top plating

3'-6" ✓

Is the bottom of the boiler insulated

no ✓

Least internal dia. of boilers

15'-6⁷/₁₆" ✓

Length

11'-6" ✓

Shell plates: Material

steel ✓

Tensile strength

28-32 tons ✓

Thickness

1³/₁₆" ✓

Are the shell plates welded or flanged

no ✓

Description of riveting: circ. seams

end D. Riv. laps ✓

seams D. Riv. - 3 Riveted ✓

Diameter of rivet holes in

circ. seams

1³/₁₆" ✓

Pitch of rivets

4⁵/₁₆" ✓

5 Rivets per pitch

plate

67.6 ✓

Percentage of strength of circ. end seams

rivets

44.6 ✓

Percentage of strength of circ. intermediate seam

plate

✓

Percentage of strength of longitudinal joint

plate

85.91 ✓

rivets

87.10 ✓

combined

89.24 ✓

Working pressure of shell by Rules

183 lb ✓

Thickness of butt straps

outer 19⁵/₁₆" x 1" ✓

No. and Description of Furnaces in each Boiler

3 Dighton ✓

Material

steel ✓

Tensile strength

26-30 tons ✓

Smallest outside diameter

49⁵/₈" ✓

Thickness of plain part

top

Gowley ✓

Thickness of plates

crown

9¹/₁₆" ✓

Description of longitudinal joint

weld ✓

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

none ✓

Working pressure of furnace by Rules

186 lb ✓

plates in steam space: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness

1¹/₂" ✓

Pitch of stays

19" ✓

Are stays secured

nuts and 11¹/₂" x 1" loose washers ✓

Working pressure by Rules

180 lb ✓

plates: Material

front steel ✓

back steel ✓

Tensile strength

26-30 tons ✓

Thickness

1¹/₂" ✓

Pitch of stay tubes in nests

11¹/₁₆" ✓

Pitch across wide water spaces

14¹/₂" x 9³/₄" ✓

Working pressure

front

256 lb ✓

back

195 lb ✓

Boilers to combustion chamber tops: Material

steel ✓

Tensile strength

28-32 tons ✓

Depth and thickness of girder

Centre

8¹/₄" x 1⁵/₈" ✓

Length as per Rule

32" ✓

Distance apart

9³/₄" ✓

No. and pitch of stays

Each

2 @ 18" ✓

Working pressure by Rules

190 lb ✓

Combustion chamber plates: Material

steel ✓

Tensile strength

26-30 tons ✓

Thickness: Sides

2³/₁₆" ✓

Back

1¹/₁₆" ✓

Top

2³/₁₆" ✓

Bottom

1¹/₁₆" ✓

Pitch of stays to ditto: Sides

8³/₈" x 11" ✓

Back

9³/₄" x 8³/₄" ✓

Top

9³/₄" x 10" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working pressure by Rules

186 lb ✓

Front plate at bottom: Material

steel ✓

Tensile strength

26-30 lb ✓

Thickness

1¹/₁₆" ✓

Lower back plate: Material

steel ✓

Tensile strength

26-30 ✓

Thickness

1⁵/₁₆" ✓

Pitch of stays at wide water space

14" x 8³/₄" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

272 lb ✓

Main stays: Material

steel ✓

Tensile strength

28-32 tons ✓

Pitch of stays

At body of stay, 3¹/₄" ✓

or

Over threads

3¹/₄" ✓

No. of threads per inch

6 ✓

Area supported by each stay

422 ✓

Working pressure by Rules

190 lb ✓

Screw stays: Material

steel ✓

Tensile strength

26-30 tons ✓

Pitch of stays

At turned off part, 1³/₄" ✓

or

Over threads

1³/₄" ✓

No. of threads per inch

8 ✓

Area supported by each stay

97.5 ✓

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Working pressure by Rules 183 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8 or Over threads 1 1/8 ✓
No. of threads per inch 8 Area supported by each stay 92.12 Working pressure by Rules 226 lb
Tubes: Material iron ✓ External diameter { Plain 3 1/2 ✓ Stay 3 1/2 ✓ Thickness { N° 8 - 4.5.9 ✓ 3/16 + 7/16 ✓ No. of threads per inch 9 ✓
Pitch of tubes 4 3/4" x 4 7/8" ✓ Working pressure by Rules 215 + 200 Manhole compensation: Size of opening in shell plate 16" x 12" ✓ Section of compensating ring 8 x 1 1/2" ✓ No. of rivets and diameter of rivet holes 27 @ 1 1/2" ✓
Outer row rivet pitch at ends 9 5/16" ✓ Depth of flange if manhole flanged ✓ 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 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 _____ 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 23 inclusive for boilers been complied with yes ✓

The foregoing is a correct description,
H. P. Hamilton Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey, are of good material and workmanship and on completion were tested by hydraulic pressure with satisfactory results.

The boilers have now been fitted on board in accordance with the Rules, examined under steam and safety valves adjusted.

The donkey boiler (on Rft No 12188, Cent No 6420) Messrs Rileys No 5539, placed on board only at this Port, See our Letter to Sunderland Surveyors attached.

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

Wm Morrison & Co. Robert
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 13 MAR 1925

Assigned _____



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