

Rpt. 5a.

REPORT ON BOILERS.

Gothenburg No. 8324

No. 14301

Date of writing Report

18. 12. 1930

When handed in at Local Office

18. 12. 1930

Received at London Office

26 MAY 1931
19 DEC 1930

No. in Survey held at

STOCKTON

Date, First Survey

5 July

Last Survey

18. 12. 1930

No. of Boilers

1

on the

boiler for

Artibolget Gotaverken

No. 5 BARFONN

Number of Visits

13+3

Tons

Gross 9739

Net 6035

Built at

Gothenburg

By whom built

M. J. Gotaverken

Yard No. 443

When built 1931

Engines made at

Gothenburg

By whom made

M. J. Gotaverken

Engine No. 1947

When made 1931

Boiler made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd

Boiler No. 6019

When made

Nominal Horse Power

Owners

Kibisaktienst. Salforn

Port belonging to

Staranger

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Vereinigte Stahlwerke A.G. Stahl Walzwerke Thyssen

(Letter for Record S.)

Total Heating Surface of Boilers

1415 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

oil

No. and Description of Boilers

1 S.B.

Working Pressure 180 lbs.

Tested by hydraulic pressure to

320 lbs.

Date of test

18. 12. 30

No. of Certificate

6836

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

oil fired

No. and Description of safety valves to each boiler

Double spring loaded

Area of each set of valves per boiler

per Rule 10.9 sq. ft.

Pressure to which they are adjusted

180 lbs.

Are they fitted with easing gear

Yes

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

No main boilers

Smallest distance between boilers or uptakes and bunkers or woodwork

AP tank bulkhead (oil)

650 mm

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

11'-8"

Length

11'-3"

Shell plates: Material

steel

Tensile strength

29/33

Thickness

15"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end D.R.

Long. seams

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

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

3 1/2" x 7"

Percentage of strength of circ. end seams

plate

65.1

rivets

42.3

Percentage of strength of circ. intermediate seam

plate

86.1

rivets

Percentage of strength of longitudinal joint

plate

86.1

rivets

86.7

combined

89.4

Working pressure of shell by Rules

181 lbs.

Thickness of butt straps

outer

3/4"

inner

7/8"

No. and Description of Furnaces in each Boiler

2 c.f.

Material

steel

Tensile strength

26/30

Smallest outside diameter

3'-7 3/8"

Length of plain part

top

9"

bottom

7/8"

Thickness of plates

crown

9"

bottom

7/8"

Description of longitudinal joint

weld.

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

Working pressure of furnace by Rules

188 lbs.

End plates in steam space: Material

steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays

16 1/2" x 14"

How are stays secured

D.N.W.

Working pressure by Rules

180 lbs.

Tube plates: Material

front

steel

back

steel

Tensile strength

26/30

Thickness

7/8"

Lean pitch of stay tubes in nests

10 1/16"

Pitch across wide water spaces

13" x 7"

Working pressure

front

233 lbs.

back

273

Girders to combustion chamber tops: Material

steel

Tensile strength

28/32

Depth and thickness of girder

Pitch of stays to ditto: Sides

7 1/2" x 3/4" (double)

Length as per Rule

2'-6"

Distance apart

8 1/2"

No. and pitch of stays

Pitch of stays to ditto: Back

10" x 9"

Length as per Rule

2'-6"

Distance apart

8 1/2"

No. and pitch of stays

Pitch of stays to ditto: Top

8 1/2" x 9"

Length as per Rule

2'-6"

Distance apart

8 1/2"

No. and pitch of stays

Working pressure by Rules

187 lbs.

Combustion chamber plates: Material

steel

Thickness

7/8"

Lower back plate: Material

steel

Tensile strength

26/30

Thickness

7/8"

Pitch of stays at wide water space

13" x 9"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

229 lbs.

Main stays: Material

steel

Tensile strength

28/32

Diameter

At body of stay,

or

Over threads

2 1/2"

No. of threads per inch

6

Area supported by each stay

226 sq. in.

Working pressure by Rules

196 lbs.

Screw stays: Material

steel

Tensile strength

26/30

Diameter

At turned off part,

or

Over threads

1 3/4"

No. of threads per inch

9

Area supported by each stay

87.6 sq. in.

W1123-0266

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Working pressure by Rules **207 lbs.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter { At turned off part, **17** or Over threads **18** ✓
No. of threads per inch **9.** Area supported by each stay **100.7** Working pressure by Rules **211 lbs.**
Tubes: Material **iron** ✓ External diameter { Stay **2½** to **2¾** ✓ Thickness { **9/16** ✓ No. of threads per inch **9.** ✓
Pitch of tubes **3¼ x 3½** ✓ Working pressure by Rules **p. 230 lbs. s. 235 lbs.** Manhole compensation: Size of opening in
shell plate **20" x 16"** ✓ Section of compensating ring **8" x 1½"** ✓ No. of rivets and diameter of rivet holes **48-1½** ✓
Outer row rivet pitch at ends **8¾** ✓ 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 _____ 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 22 inclusive for boilers been complied with **Yes** ✓

The foregoing is a correct description,

J. B. Shields

Manufacturer.

SECRETARY

Dates of Survey { During progress of work in shops - - **1930. by 5.11.18.22.25. Aug. 21 Oct. 29** Are the approved plans of boiler and superheater forwarded herewith **Yes** ✓
while building { During erection on board vessel - - **1931. April 13, May 9 & 2** (If not state date of approval.) **(with 4/21/14300)**
Total No. of visits **13 + 3.**

Is this Boiler a duplicate of a previous case **Yes** ✓ If so, state Vessel's name and Report No. **Pilep 5941 Sub Rpt 13781.**

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 is being shipped to Sweden.

This donkey boiler has been fitted on board this vessel under my inspection and to my satisfaction.

Survey Fee ... £ **9-8-0** When applied for, **Monthly** ✓
Travelling Expenses (if any) £ : : When received, **19**

P. J. Main
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 29 MAY 1931**

Assigned *Su J. B. Rpt.*



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