

REPORT ON BOILERS.

No. 14281
1026

Received at London Office

26 NOV 1930

Date of writing Report

When handed in at Local Office

Port of MIDDLESBROUGH

No. in Survey held at

STOCKTON.

Date, First Survey

23 Sept

Last Survey

19. 11. 1930.

on the

boiler for Kockums Mek Verkstads Aktiefelag

"FALKEFJELL"

Tons { Gross 7927 Net 4603

Master

Built at

Malmö

By whom built

Kockums M. V. A. B.

Yard No. 168

When built 1931.

Engines made at

Malmö

By whom made

Kockums M. V. A. B.

Engine No. 63264

When made 1931.

Boiler made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd

Boiler No. 6020

When made 1930

Indicated Horse Power

778

Owners

Aktin. Falkerfjell

Port belonging to

Oslo.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Vereinigte Stahlwerke Thyssen, Mulheim

(Letter for Record S.)

Total Heating Surface of Boilers

1315 sq. ft.

Is forced draught fitted

Yes

Coal or Oil fired

oil

No. and Description of Boilers

1 S.B.

Working Pressure 171 lbs.

Tested by hydraulic pressure to

307 lbs.

Date of test

19. 11. 30.

No. of Certificate

6833.

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two direct spring loaded.

Area of each set of valves per boiler

per Rule 10.6 sq. in. as fitted 11.9 sq. in.

Pressure to which they are adjusted

175 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 and bunkers

3'-8"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

1'-8"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

11'-2 1/2"

Length

11'-2"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

7/8"

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"

long. seams 1 5/16"

Pitch of rivets

3 1/4"

Percentage of strength of circ. end seams

plate 68.2. rivets 46.8.

Percentage of strength of circ. intermediate seam

plate 86.1. rivets 86.8.

Percentage of strength of longitudinal joint

plate 86.1. rivets 86.8. combined 89.5.

Working pressure of shell by Rules

175 lbs.

Thickness of butt straps

outer 3 1/2" inner 3 1/2"

No. and Description of Furnaces in each Boiler

2 c.f.

Material

Steel

Tensile strength

26/30.

Smallest outside diameter

3'-6 1/16"

Length of plain part

top 17" bottom 32"

Thickness of plates

top 17" bottom 32"

Description of longitudinal joint

Weld.

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

Working pressure of furnace by Rules

181 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30.

Thickness

27/32"

Pitch of stays

16" x 13 3/4"

How are stays secured

D.N.W.

Working pressure by Rules

176 lbs.

Tube plates: Material

front Steel back Steel

Tensile strength

26/30.

Thickness

27/32"

13/16"

Lean pitch of stay tubes in nests

8 7/8"

Pitch across wide water spaces

13" x 7"

Working pressure

front 223 lbs. back 297"

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32.

Depth and thickness of girder

at centre

8 1/2" x 3/4" (double)

Length as per Rule

2'-5"

Distance apart

8 1/4"

No. and pitch of stays

at each

2.9'

Working pressure by Rules

269 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30.

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

5/8"

Pitch of stays to ditto: Sides

8 1/4" x 9"

Back

8" x 8 1/2"

Top

8 1/4" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30.

Thickness

27/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

27/32"

Pitch of stays at wide water space

13" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

241 lbs.

Main stays: Material

Steel

Tensile strength

28/32.

Diameter

At body of stay, 2 3/8"

Over threads

No. of threads per inch

6.

Area supported by each stay

215.5 sq. in.

Working pressure by Rules

182 lbs.

Screw stays: Material

Steel

Tensile strength

26/30.

Diameter

At turned off part, 1 1/2"

Over threads

No. of threads per inch

9.

Area supported by each stay

66.2 sq. in.

Working pressure by Rules 189 lbs Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 7/8" or Over threads 1 7/8"
No. of threads per inch 9 Area supported by each stay 87.2 Working pressure by Rules 174 lbs.
Tubes: Material iron External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 10 w.s. No. of threads per inch 9
Pitch of tubes 3 1/2" x 3 1/8" Working pressure by Rules p. 173 lbs. s. 23 lbs. Manhole compensation: Size of opening 4 1/2"
shell plate 20" x 16" Section of compensating ring 7 1/2" x 1" No. of rivets and diameter of rivet holes 44 - 1 1/2"
Outer row rivet pitch at ends 7 1/2" 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 rivets
stays Inner radius of crown Working pressure by Rules
How connected to shell Size of doubling plate under dome Diameter of rivet holes and
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
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
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.
RILEY BROS. (BOILERMAKERS) LIMITED.

Dates of Survey { During progress of work in shops - - - 1930, Sep 22, 29 Oct 8, 21 Nov 4, 10, 14, 19
while building { During erection on board vessel - - - 27.2.73, 9.3.14, 23.3, 28.3.30, 4.4.1931
are the approved plans of boiler and superheater forwarded herewith (If not state date of approval)
Total No. of visits 8 8.

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

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 dunking boiler has been installed onboard under my supervision and to my satisfaction.
The safety valves have been adjusted under steam to 175 lbs.
The oil fuel burning installation is a single as steam is not required any essential work at sea.

Admiral

Survey Fee ... £ 8-16-0. When applied for, Monthly
Travelling Expenses (if any) £ : : When received, 19

Committee's Minute

TUE. 21 APR 1931

Assigned

Not for Classing See F.E. Rep.
Committee

Engineer Surveyor to Lloyd's Register of Shipping



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