

REPORT ON BOILERS.

No. 14210
27 DEC 1930

Received at London Office

11 SEP 1930

of writing Report

9.9.30 When handed in at Local Office

9.9.30 Port of MIDDLESBROUGH.

Survey held at

STOCKTON.

Gothenburg

Date, First Survey

30 May/30

Last Survey

9.9.1930

on the

[boiler for Artubolag Gotaverken]

Twin L. Motorvessel

"NORDANVIK"

Tons

Gross 8933
Net 4808

ster

Built at

Gothenburg

By whom built

AB Gotaverken

Yard No.

438

When built

1930

gines made at

Gothenburg

By whom made

AB Gotaverken

Engine No.

1921

When made

1930

ilers made at

Stoerlin

By whom made

Riley Bros. (Boilermakers) Ltd

Boiler No.

5948

When made

1930

iminal Horse Power

634

Owners

Norhøpings Rederiaktut

Port belonging to

Norhøping.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wilkowitzer Bergbau und Eisenhütten Gesellschaft

(Letter for Record S.)

tal Heating Surface of Boilers

1415 sq.

Is forced draught fitted

Yes

Coal or Oil fired

Oil or exhaust gas from main eng.

o. and Description of Boilers

1 SB.

Working Pressure

180 lbs.

tested by hydraulic pressure to

320 lbs.

Date of test

9.9.30.

No. of Certificate

6818.

Can each boiler be worked separately

Yes

area of Firegrate in each Boiler

Fired with oil or exhaust gas from main engine

No. and Description of safety valves to each boiler

Double spring loaded

area of each set of valves per boiler

per Rule as fitted

3"

Pressure to which they are adjusted

185 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 fitted

Smallest distance between boilers or uptakes and

AP (oil tank) bulkhead

700 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'-8"

Shell plates: Material

Steel

Tensile strength

29/33 D.R.

Thickness

15/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

ing. seams

T.R.D.A.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 rivets

65.1

Percentage of strength of circ. intermediate seam

plate rivets

42.5

Percentage of strength of longitudinal joint

plate rivets

86.7

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 bottom

Thickness of plates

crown bottom

9/16" 7/16"

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 back

Steel

Tensile strength

26/30

Thickness

7/8"

Working pressure

front 233 lbs. back 273 ..

Mean pitch of stay tubes in nests

10 1/2"

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

at centre

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

Length as per Rule

2'-6"

Distance apart

8 1/2"

No. and pitch of stays

in each

2.9"

Working pressure by Rules

187 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

11/16"

Back

11/16"

Top

11/16"

Bottom

11/16"

Pitch of stays to ditto: Sides

10" x 9"

Back

10" x 9"

Top

8 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

182 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

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

Working pressure by Rules

196 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, or over threads

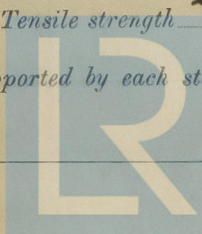
1 3/4"

No. of threads per inch

9

Area supported by each stay

87.6 sq



Lloyd's Register Foundation

To be checked on return

Working pressure by Rules 207 lb. Are the stays drilled at the outer ends no. Margin stays Diameter { At turned off part, or Over threads 1 1/2"
No. of threads per inch 9. Area supported by each stay 100.7 sq Working pressure by Rules 211 lb.
Tubes: Material iron External diameter { Plain 2 1/2" to 2 3/4" Stay 2 1/2" to 2 3/4" Thickness 9/16" No. of threads per inch 9.

Pitch of tubes 3 1/4" x 3 1/2" Working pressure by Rules p. 230 lb. & 235 lb. Manhole compensation: Size of opening 7"
shell plate 20" x 16" Section of compensating ring 8" x 1 1/2" No. of rivets and diameter of rivet holes 48-1 3/2"
Outer row rivet pitch at ends 8 1/4" 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 of rivets in outer row in dome connection to shell

Type of Superheater
Number of elements Material of tubes Manufacturers of { Tubes Steel castings
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 to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes FOR
The foregoing is a correct description,
J. B. Shields

Dates of Survey { During progress of work in shops - - 1930 May 30 June 5, 11, 23, 26 July 11, 16 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 3-9-30
while building { During erection on board vessel - - - Aug. 7, 16, 29, Sep. 5, 15, 29
board vessel - - - 1930 Oct 30, Dec 6, 10 Total No. of visits 14 + 3

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. Riley 5944, Hab Rpt 13981

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 Rule and approved Plan. It is being shipped to Sweden.

This Donkey boiler has been fitted on board this vessel under my inspection & to my satisfaction.

Survey Fee ... £ 9.8-0. When applied for, Monthly
Travelling Expenses (if any) £ : : When received, 10

Committee's Minute FRI. 16 JAN 1931
Assigned See other J.E. Rpt fol. 8165
P. J. Ma.
Engineer Surveyor to Lloyd's Register of Shipping.