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## REPORT ON BOILERS.

No. 13235.

Received at London Office 8 MAR 1928

1 MAY 1928

of writing Report

6. 3. 1928

When handed in at Local Office

6. 3. 1928

Port of MIDDLESBROUGH.

in Survey held at

STOCKTON.

Date, First Survey

21-2-28-

Last Survey

19. 4. 28.

Book.

(Number of Visits 4. +2 = 6.)

6. 3. 1928.

Sup.

on the donkey boiler for S.S. "NIEMEN"

Gross 3100

Net 1830.

er

Built at Thornaby on Tees

By whom built

Craig Taylor &amp; Co.

Yard No. 209.

When built 1928.

es made at

Sunderland

By whom made

North Eastern Mar. Eng. Co.

Engine No.

When made 1928.

and diameter

made at

Stockton

By whom made

Riley Bros. (Boilermakers) Ltd.

Boiler No. 5813

When made 1928.

nal Horse Power

Owners

Panstwowe Przedsiębiorstwo  
"Zegluga Polska"

Port belonging to

Gdynia

LITUBULAR BOILERS ~~MAIN~~, ~~AUXILIARY~~, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland.

(Letter for Record S.)

Heating Surface of Boilers

880 sq. ft.

Is forced draught fitted

no.

Coal or Oil fired coal.

Description of Boilers

One S.B.

Working Pressure 100 lbs.

d by hydraulic pressure to

200 lbs.

Date of test

6.3.28

No. of Certificate

6622.

Can each boiler be worked separately

✓

of Firegrate in each Boiler

29 sq. ft.

No. and Description of safety valves to each boiler

Gain Cockburn Improved High Lift

of each set of valves per boiler

per Rule 4.78

as fitted

6.28

Pressure to which they are adjusted 105 lbs.

Are they fitted with easing gear

✓

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

no.

test distance between boilers

1'-6"

Is oil fuel carried in the double bottom under boilers

no.

test distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

no.

est internal dia. of boilers

10'-0"

Length

10'-0"

Shell plates: Material

Steel

Tensile strength

28/32

ness

17/32

Are the shell plates welded or flanged

no.

Description of riveting: circ. seams

end D.R.

seams

D.R.D.S.S.

Diameter of rivet holes in

circ. seams

15/16"

long. seams

13/16"

Pitch of rivets

3"x6"

inter.

3 7/8"

centage of strength of circ. end seams

plate

68.7.

rivets

53.3.

Percentage of strength of circ. intermediate seam

plate

✓

rivets

centage of strength of longitudinal joint

plate

79.0

rivets

116.5

combined

96.8.

Working pressure of shell by Rules 100 lbs.

tness of butt straps

outer

15/32

inner

19/32

No. and Description of Furnaces in each Boiler

2 Corrugated

rial

Steel

Tensile strength

26/30.

Smallest outside diameter

2'-10 3/4"

th of plain part

top

✓

bottom

✓

Thickness of plates

crown

3/8"

bottom

✓

Description of longitudinal joint

weld

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

✓

Working pressure of furnace by Rules

152 lbs.

plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

25/32

Pitch of stays 17 x 18 1/2 (mean)

are stays secured

D.N.W.

Working pressure by Rules

107 lbs.

plates: Material

front

Steel

back

✓

Tensile strength

26/30.

Thickness

25/32

9/8"

pitch of stay tubes in nests

10 13/16"

Pitch across wide water spaces

14"

Working pressure

front

108 lbs.

back

117"

ers to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

entre 5 3/4 x 7/8 (double)

Length as per Rule

2'-4"

Distance apart

8 1/2"

No. and pitch of stays

ch 2-8 1/2"

Working pressure by Rules

105 lbs.

Combustion chamber plates: Material

Steel

ile strength

26/30

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

1/2"

h of stays to ditto: Sides

8 3/4 x 8 1/2"

Back

10 1/2 x 7 1/2"

Top

8 1/2 x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

king pressure by Rules

101 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

tness

25/32

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

25/32

of stays at wide water space

14" x 7 1/2"

Are stays fitted with nuts or riveted over

nuts

ing Pressure

196 lbs.

Main stays: Material

Steel

Tensile strength

28/32

eter { At body of stay,

2 1/4"

No. of threads per inch

6.

Area supported by each stay

310 sq

eter { Over threads

2 1/4"

Screw stays: Material

Steel

Tensile strength

26/30.

ing pressure by Rules

111 lbs.

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { At turned off part,

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq

eter { Over threads

1 1/4"

No. of threads per inch

9.

Area supported by each stay

78 1/4 sq



Working pressure by Rules 101 lbs 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 9. Area supported by each stay 86 sq Working pressure by Rules 107 lbs.  
Tubes: Material iron External diameter { Plain 3 1/4" to 3 7/16" Thickness { 10 W.G. No. of threads per inch 9.  
Pitch of tubes 4 1/4" x 4 3/8" Working pressure by Rules p. 130 s. 258 lbs. Manhole compensation: Size of open  
shell plate 20" x 16" Section of compensating ring 6" x 3/4" No. of rivets and diameter of rivet holes 44 - 15/16"  
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged 3" 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 diam  
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  
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  
Rules Pressure to which the safety valves are adjusted Hydraulic test pre  
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 23 inclusive for boilers been complied with Yes.

The foregoing is a correct description,  
FOR RILEY BROS. (BOILERMAKERS) LTD. Manufactured

Dates of Survey { During progress of work in shops - - Feb. 21-24-29 Mar. 6- Mar. 27 Apr. 19 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes  
while building { During erection on board vessel - - - Total No. of visits 4.

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 fitted aboard at Sunderland.

This boiler has been securely fitted aboard and its safety valve adjusted and tested under steam with satisfactory results  
Safety valve works p. 9 1/32" s 3/8"

P. J. Man.

Survey Fee ... £ 5-18-0. When applied for, MONTHLY A/c.  
Travelling Expenses (if any) £ : : When received, 192

P. J. Man.

Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute TUES. 8 MAY 1928

Assigned

See P. J. Man. attached  
(Sed. No 29712)



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Foundation