

## REPORT ON BOILERS.

No. 12121

Received at London Office

21 OCT 1924

Writing Report

192

When handed in at Local Office

18.10.24

Port of

Middlesbrough

Survey held at

Stockton-on-Tees

Date, First Survey

30 July

Last Survey

14 October 1924

on the

Steel Screw Steamer HAMSTERLEY

(Number of Visits

21)

Gross

Tons

Net

Built at

South Bank

By whom built

Smith's Dock &amp; Co Ltd

Yard No.

808

When built

1924

es made at

South Bank

By whom made

Smith's Dock &amp; Co Ltd

Engine No.

269

When made

1924

s made at

Stockton

By whom made

Blair &amp; Co Ltd

Boiler No.

A.192

When made

1924

al Horse Power

228

Owners

Port belonging to

## LITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Mason D. Colville &amp; Sons Ltd

(Letter for Record (S) )

Heating Surface of Boilers

3947

Is forced draught fitted

Yes

Coal or Oil fired

Coal

and Description of Boilers

Two single ended

Working Pressure

180

by hydraulic pressure to

320

Date of test

14.10.24

No. of Certificate

6402

Can each boiler be worked separately

Yes

of Firegrate in each Boiler

512

No. and Description of safety valves to each boiler

2 Direct Spring

of each set of valves per boiler

per Rule

12.9

as fitted

14.12

Pressure to which they are adjusted

130 lb

Are they fitted with easing gear

Yes

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

Yes

est distance between boilers or uptakes and bunkers or woodwork

2'-0"

Is oil fuel carried in the double bottom under boilers

Yes

est distance between shell of boiler and tank top plating

2'-6"

Is the bottom of the boiler insulated

Yes

st internal dia. of boilers

14'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

28-32

thickness

1 3/4"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

2 Riveted lap

seams

2 Butt - 3 Riveted

Diameter of rivet holes in

circ. seams

1 1/2"

Pitch of rivets

4"

8.75"

ntage of strength of circ. end seams

plate

67.25

rivets

46.6

Percentage of strength of circ. intermediate seam

plate

85.71

ntage of strength of longitudinal joint

plate

85.71

rivets

91.00

combined

89.62

Working pressure of shell by Rules

180 lb

ress of butt straps

outer 18 1/2 x 13/16

inner 18 1/2 x 1 1/2

No. and Description of Furnaces in each Boiler

3 Brighton

ial

Steel

Tensile strength

26-30 tons

Smallest outside diameter

41.56"

k of plain part

top

bottom

Thickness of plates

crown

1 1/2"

bottom

3/2"

Description of longitudinal joint

Weld

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

None

Working pressure of furnace by Rules

185 lb

lates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 3/4"

Pitch of stays

20" x 15 1/2"

ure stays secured

nuts &amp; 10 1/2 dia x 1" brass washers

Working pressure by Rules

180 lb

plates: Material

front Steel

back Steel

Tensile strength

26-30 tons

Thickness

1 1/2"

25"

pitch of stay tubes in nests

10 5/8"

Pitch across wide water spaces

14 1/2" x 9"

Working pressure

front 187 lb

back 206 "

rs to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

tre

8 3/4" x 1 1/2"

Length as per Rule

32 1/2"

Distance apart

9"

No. and pitch of stays

h

30 8 1/2"

Working pressure by Rules

194 lb

Combustion chamber plates: Material

Steel

e strength

26-30 tons

Thickness: Sides

2 1/2"

Back

1 1/2"

Top

2 1/2"

Bottom

1"

of stays to ditto: Sides

9" x 8 1/2"

Back

9 1/4" x 9"

Top

9" x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

ng pressure by Rules

194

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

ess

1 1/2"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

2 1/2"

of stays at wide water space

14 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Shipping Pressure

238 lb

Main stays: Material

Steel

Tensile strength

28-32

ter

At body of stay, 3"

Over threads, 3"

No. of threads per inch

6

Area supported by each stay

353

ng pressure by Rules

263 lb

Screw stays: Material

Steel

Tensile strength

26-30 tons

ter

At turned off part, 1 1/4"

Over threads, 1 1/4"

No. of threads per inch

8

Area supported by each stay

83.25

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Working pressure by Rules 215 lb Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 7/8 Over threads 1 7/8 ✓  
No. of threads per inch 8 Area supported by each stay 105.75 Working pressure by Rules 196  
Tubes; Material iron External diameter { Plain 3 1/2 Stay 3 1/2 Thickness { Nº 8 - 459 5/16 No. of threads per inch 9 ✓  
Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 210 lb Manhole compensation: Size of opening in  
shell plate 16" x 12" Section of compensating ring 7 3/4" x 1 3/8" No. of rivets and diameter of rivet holes 28 @ 1 1/2" ✓  
Outer row rivet pitch at ends 8 3/4" Depth of flange if manhole flanged ✓ Steam Dome: Material none  
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,  
BLAIR & Co., LIMITED Frank F. Keacock Manufacturer.

Dates of Survey { During progress of work in shops - - } 1924 Jul. 30 Aug. 1. 8. 14. 25. 24. 29. Sept. 2. 5. 10. 12. 15. 18. 22. 26. 29. Oct. 2. 5. 10. 13. 14 Are the approved plans of boiler and superheater forwarded herewith yes ✓  
(If not state date of approval.)  
building { During erection on board vessel - - } \_\_\_\_\_ Total No. of visits 21

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 are to be fitted on board at this port  
These boilers have now been fitted on board, satisfactorily examined under steam and safety valves adjusted  
Chas W Oxford

Survey Fee ... £ 26-6-0 When applied for, MONTHLY A/c. 192  
Travelling Expenses (if any) £ : : When received, 192

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

Committee's Minute FRI. 2 JAN 1925

Assigned \_\_\_\_\_



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