

REPORT ON BOILERS.

No. 28960

Received at London Office

-2 DEC 1924

Date of writing Report

102

When handed in at Local Office

-1 DEC 1924

Port of

SUNDERLAND

No. in Survey held at

Sunderland

Date, First Survey

Last Survey

Dec. 1st 1924
Nov 28 1924

g. Book.

on the **SS FYLINGDALE**

(Number of Visits)

Gross 2918

Net 2322

Master

Built at **Sunderland**

By whom built **J. L. Thompson & Co**

Yard No. **553**

When built **1924**

Engines made at

Sunderland

By whom made

Richardson Westgarth & Co Ltd

Engine No. **2189**

When made **1924**

Boilers made at

Sunderland

By whom made

Richardson Westgarth & Co

Boiler No. **2189**

When made **1924**

Nominal Horse Power

Owners **Howland, Marwood S.S. & Co Ltd**

Port belonging to

Whitby

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel

The Steel Co of Scotland

(Letter for Record **S**)

Total Heating Surface of Boilers

5423 sq ft

Is forced draught fitted **No**

Coal or Oil fired **Coal**

No. and Description of Boilers

Two single ended

Working Pressure **180 lbs**

Tested by hydraulic pressure to

320 lbs

Date of test **15.8.24**

No. of Certificate **3895**

Can each boiler be worked separately **YES**

Area of Firegrate in each Boiler

63 sq ft

No. and Description of safety valves to each boiler

2 Spring valves

Area of each set of valves per boiler

per Rule **17.4 sq ft**
as fitted **19.2 sq ft**

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 **YES**

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Is oil fuel carried in the double bottom under boilers **NO**

Smallest distance between shell of boiler and tank top plating

23"

Is the bottom of the boiler insulated **YES**

Largest internal dia. of boilers

16-6"

Length **11-0"**

Shell plates: Material

S

Tensile strength **28-32**

Thickness

1 1/32"

Are the shell plates welded or flanged **No**

Description of riveting: circ. seams

end **Laps with**
inter. **Laps with**

Long. seams

d. 1/2" br. riv.

Diameter of rivet holes in

circ. seams **1 1/4"**
long. seams **1 1/2"**

Pitch of rivets

3.48"

Percentage of strength of circ. end seams

plate **64**
rivets **43.1**

Percentage of strength of circ. intermediate seam

plate **64**
rivets **64.6**

Percentage of strength of longitudinal joint

plate **85.7**
rivets **87.0**
combined **96.4**

Working pressure of shell by Rules **180**

Thickness of butt straps

outer **1 5/32"**
inner **1 5/32"**

No. and Description of Furnaces in each Boiler

3 Morrison

Material

S

Tensile strength **26-28**

Smallest outside diameter **48 1/2"**

Length of plain part

top **✓**
bottom **✓**

Thickness of plates

crown **5/8"**
bottom **5/8"**

Description of longitudinal joint **Welded**

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

Working pressure of furnace by Rules **188**

End plates in steam space: Material

S

Tensile strength **26-30**

Thickness **1 1/16"**

Pitch of stays **17 1/4" x 16 1/2"**

How are stays secured

d. 2 1/2" x 1 1/2"

Working pressure by Rules **183**

Tube plates: Material

front **S**
back **S**

Tensile strength **26-30**

Thickness

29/32"
25/32"

Mean pitch of stay tubes in nests **10.8"**

Pitch across wide water spaces **14 1/2"**

Working pressure

front **190**
back **188**

Girders to combustion chamber tops: Material

S

Tensile strength **28-32**

Depth and thickness of girder

At centre

8 x 1 1/2"

Length as per Rule **32 3/8"**

Distance apart **8 3/8"**

No. and pitch of stays

In each

2, 10"

Working pressure by Rules **188**

Combustion chamber plates: Material

S

Tensile strength

26-30

Thickness: Sides **1/16"**

Back **2 1/32"**

Top **1/16"**

Bottom **25/32"**

Pitch of stays to ditto: Sides

10 x 8 1/2"

Back **8 1/8" x 9 3/4"**

Top **10 x 8 3/8"**

Are stays fitted with nuts or riveted over **nuts**

Working pressure by Rules **186**

Front plate at bottom: Material

S

Tensile strength **26-30**

Thickness

7/8"

Lower back plate: Material

S

Tensile strength **26-30**

Thickness **13/16"**

Pitch of stays at wide water space **13 3/4"**

Are stays fitted with nuts or riveted over **margin. stays nutted**

Working Pressure **210 lbs**

Main stays: Material

S

Tensile strength **28-32**

Diameter

At body of stay, **2 3/4"**
or **2 3/4"**
Over threads

No. of threads per inch **6**

Area supported by each stay **284 sq in**

Working pressure by Rules **194**

Screw stays: Material

S

Tensile strength **26-30**

Diameter

At turned off part, **1 5/8"**
or **1 5/8"**
Over threads

No. of threads per inch **9**

Area supported by each stay **83 3/4 sq in**

REPORT ON BOILERS

Working pressure by Rules 181 Are the stays drilled at the outer ends NO ✓ Margin stays: Diameter { At turned off part, 1 3/4 or Over threads 1 3/4

No. of threads per inch 9 ✓ Area supported by each stay 95.4 Working pressure by Rules 190

Tubes: Material 2mm ✓ External diameter { Plain 3 1/2 ✓ Stay 3 1/2 ✓ Thickness { 5/16 ✓ 3/16 ✓ No. of threads per inch 9

Pitch of tubes 4 7/16 x 4 5/8 ✓ Working pressure by Rules 207 Manhole compensation: Size of opening

shell plate 16 x 12 ✓ Section of compensating ring 16 1/2 x 1 1/2 ✓ No. of rivets and diameter of rivet holes 22, 1 1/2 ✓

Outer row rivet pitch at ends 9 3/8 ✓ 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 _____

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 NONE 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 or 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 _____

For **RICHARDSONS, WESTGARTH & Co. LIMITED**

David St. Russell _____ The foregoing is a correct description, _____
MANAGER, SUNDERLAND WORKS. _____
Manufacture

Dates of Survey { During progress of work in shops -- } Please see Report Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) _____

{ During erection on board vessel -- } Machinery Total No. of visits _____

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These Boilers have been built under special survey, the materials and workmanship are sound and good and they have been fitted and found in the vessel in a satisfactory manner.

Survey Fee £ Please see Machinery Report When applied for, 192

Travelling Expenses (if any) £ _____ When received, 192

H. A. H. S. Schwan
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 2 DEC 1924

Assigned See other report
Sld J.C. 28960

