

## REPORT ON BOILERS.

No. 4989

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

TUES. 9 APR 1907

No. in Survey held at Stockton  
Reg. Book.Date, first Survey 24<sup>th</sup> FebLast Survey 28<sup>th</sup> March 1907(Number of Visits 6)Gross 81  
Tons Net 16Master 68444 on theBuilt at SelbyBy whom built Bochane & CoWhen built 1907Engines made at YarmouthBy whom made Crabtree & Co. Ltdwhen made 1907Boilers made at StocktonBy whom made Riley Bros (Boilermakers) Ltdwhen made 1907Registered Horse Power 32Owners Lowestoft S. H. D. Co LtdPort belonging to Lowestoft

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel J. Spencer & Sons Ltd(Letter for record (5))Total Heating Surface of Boilers 640 sq ftIs forced draft fitted No

No. and Description of

Boilers One, Cylindrical single endedWorking Pressure 140Tested by hydraulic pressure to 280Date of test 28-3-07No. of Certificate 3885Can each boiler be worked separately —Area of fire grate in each boiler 25 sq ft

No. and Description of

safety valves to each boiler Two SpringArea of each valve 3.14 sq inPressure to which they are adjusted 140 lbsAre they fitted with easing gear YesIn case of donkey boilers, state whether steam from main boilers can enter the donkey boiler —Smallest distance between boilers or uptakes and bunkers or woodwork 4 1/2"Internal dia. of boilers 9'-0"Length 8'-9"Material of shell plates SteelThickness 27/32Range of tensile strength 28/32Are the shell plates welded or flanged NoDescrip. of riveting: cir. seams D.R. Cap.long. seams D.R. D.B.S.Diameter of rivet holes in long. seams 15/16Pitch of rivets 3 3/4"Lap of plates or width of butt straps 9 1/2" x 27/32

Per centages of strength of longitudinal joint

rivets 76

Working pressure of shell by

rules 143Size of manhole in shell 16" x 10 1/2"Size of compensating ring 4" x 27/32

No. and Description of Furnaces in each

boiler 2. plainMaterial SteelOutside diameter 2'-8"

Length of plain part

top 5'-8 1/2"bottom 7'-6 1/2"Thickness of plates crown 3 5/8"bottom 3 5/8"Description of longitudinal joint WeldedNo. of strengthening rings ✓Working pressure of furnace by the rules 145plates: Material SteelThickness: Sides 1/2"Back 9/16"Top 1/2"Bottom 11/16"Pitch of stays to ditto: Sides 6" x 8"Back 8 1/2" x 8 1/2"Top 6" x 7"If stays are fitted with nuts or riveted heads TubesWorking pressure by rules 147Material of stays Steel

Diameter at

smallest part 1 5/8"Area supported by each stay 74.57 sq inWorking pressure by rules 159End plates in steam space: Material SteelThickness 27/32Diameter at smallest part 2 1/2"Pitch of stays 5" x 19How are stays secured D.R. W.Working pressure by rules 208Material of stays SteelDiameter at smallest part 2 1/2"Area supported by each stay 266 sq inWorking pressure by rules 184Material of Front plates at bottom SteelThickness 27/32

Material of

Lower back plate SteelThickness 27/32Greatest pitch of stays 11" x 8 3/4"Pitch of tubes 4 1/2" x 4 1/4"Material of tube plates SteelThickness: Front 27/32Back 5/8"Mean pitch of stays 8 1/2"

Pitch across wide

water spaces 1/3"Working pressures by rules 150Girders to Chamber tops: Material Steel

Depth and thickness of

girder at centre 5 3/4" x 1 1/4"Length as per rule 1'-11"Distance apart 7'Number and pitch of Stays in each 2 - 6"Working pressure by rules 149Superheater or Steam chest: how connected to boiler Welded

Can the superheater be shut off and the boiler worked

separately NoDiameter 2'-6"Length 2'-0"Thickness of shell plates 1/2"Material SteelDescription of longitudinal joint S.R.P.

Diam. of rivet

holes 13/16"Pitch of rivets 2"Working pressure of shell by rules ✓Diameter of flue ✓Material of flue plates ✓Thickness ✓If stiffened with rings ✓Distance between rings ✓Working pressure by rules ✓End plates: Thickness 3/4"How stayed 2'-6" RodsWorking pressure of end plates ✓Area of safety valves to superheater ✓Are they fitted with easing gear ✓

2 claps

VERTICAL DONKEY BOILER—

No. Description

Manufacturers of steel

Made at

By whom made

When made

Where fixed

Working pressure

tested by hydraulic pressure to

Date of test

No. of Certificate

Fire grate area

Description of safety valves

No. of safety valves

Area of each

Pressure to which they are adjusted

If fitted with easing gear

If steam from main boilers can

enter the donkey boiler

Dia. of donkey boiler

Length

Material of shell plates

Thickness

Range of tensile

strength

Descrip. of riveting long. seams

Dia. of rivet holes

Whether punched or drilled

Pitch of rivets

Lap of plating

Per centage of strength of joint

Rivets

Working pressure of shell by rules

Thickness of shell crown plates

Radius of do.

No. of Stays to do.

Dia. of stays

Diameter of furnace Top

Bottom

Length of furnace

Thickness of furnace plates

Description of joint

Working pressure of furnace by rules

Thickness of furnace crown

plates

Radius of do.

Stayed by

Diameter of uptake

Thickness of uptake plates

Thickness of water tubes

The foregoing is a correct description,

RILEY BROS. (BOILERMAKERS) LIMITED, Manufacturer.

Dates of Survey while building  
During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits

1907 Feb 24 March 5. 8. 12. 18. 28

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " "

No. retained in duplicate

Lloyd's Register Foundation



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

This boiler has been built under Special Survey. The materials and workmanship are good and efficient. After satisfactorily withstanding the hydraulic test it has been despatched for fitting on board.

This boiler has been fitted on board, tested under steam and safety valves set to 140 lbs. and is now respectfully submitted as being eligible in my opinion to be classed with the notation of  $\frac{1}{2}$  L.M. 6.4.07. in the Register Book.

James Barclay  
1.5.07

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee...

Special ...

Donkey Boiler Fee ...

Travelling Expenses (if any) £

£

£

£

£

When applied for,

19

When received,

£3.3.0 paid 18/9/07

*L. J. Hudson*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 17 MAY 1907

Assigned

See Minute on Don. Rpt

No. 69574



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