

# REPORT ON BOILERS.

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

WED. 14 FEB 1906

No. in Survey held at Stockton  
Reg. Book.

Date, first Survey 23<sup>rd</sup> Nov. 1905 Last Survey 1<sup>st</sup> Feb<sup>y</sup> 1906  
(Number of Visits 50)

on the Donkey Boiler No 3594 for S. S. Ludgate

Gross 3708.46  
Net 2390.03

Master H. Nicholson Built at Sunderland By whom built Bartram & Sons

When built 1906

Engines made at Sunderland By whom made J. Dickinson & Sons

when made 1906

Boilers made at Stockton By whom made Riley Bros (Boilermakers) Ltd

when made 1905

Registered Horse Power

Owners Dowgate Steamship Co. Ltd.

Port belonging to London

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Spencer & Sons Ltd

(Letter for record (S)) Total Heating Surface of Boilers 830 ft<sup>2</sup> Is forced draft fitted ✓ No. and Description of

Boilers One Cyl. Mult. Single ended Working Pressure 100 lb Tested by hydraulic pressure to 200 lb Date of test 28.12.05

No. of Certificate 3576 Can each boiler be worked separately ✓ Area of fire grate in each boiler 29 ft<sup>2</sup> No. and Description of

safety valves to each boiler 2 spring Area of each valve 7.07 in<sup>2</sup> Pressure to which they are adjusted 100 lb

Are they fitted with easing gear ✓ In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers or uptakes and bunkers or woodwork ✓ Mean dia. of boilers 10'-0" Length 9'-6"

Material of shell plates Steel Thickness 5" Range of tensile strength 27/32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams DR lap long. seams DR. DB.S. Diameter of rivet holes in long. seams 15/16" Pitch of rivets 4"

Lap of plates or width of butt straps 9 1/2" Per centages of strength of longitudinal joint rivets 82 Working pressure of shell by plate 76.5

rules 107 lb Size of manhole in shell 16" x 21" Size of compensating ring 9" x 1" No. and Description of Furnaces in each

boiler Two plain Material steel Outside diameter 3'-0" Length of plain part top 6'-1 1/2" Thickness of plates crown 19" bottom 32"

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 106 Combustion chamber

plates: Material Steel Thickness: Sides 15/32 Back 15/32 Top 9/16" Bottom 5/8" Pitch of stays to ditto: Sides 8 1/4" x 7" Back 7 1/4" x 8 1/4"

Top 7" x 12" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 105 lb Material of stays Steel Diameter at

smallest part 1 1/8" Area supported by each stay 78.4 in<sup>2</sup> Working pressure by rules 100.9 End plates in steam space: Material Steel Thickness 2 1/2"

Pitch of stays 8" x 18" How are stays secured by rivets Working pressure by rules 123 Material of stays Steel Diameter at smallest part 2 1/4"

Area supported by each stay 324 in<sup>2</sup> Working pressure by rules 22 Material of Front plates at bottom Steel Thickness 3 1/2" Material of

Lower back plate Steel Thickness 2 1/2" Greatest pitch of stays 12 x 7 3/4" Working pressure of plate by rules 241 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/4" x 4 3/4" Material of tube plates Steel Thickness: Front 2 1/2" Back 9/16" Mean pitch of stays 9 1/2" Pitch across wide

water spaces 13 1/2" Working pressures by rules 125 & 150 Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 7" x 1 1/2" Length as per rule 2'-2" Distance apart 12" Number and pitch of Stays in each two 7"

Working pressure by rules 122 lb Superheater or Steam chest: how connected to boiler none Can the superheater be shut off and the boiler worked

separately — Diameter — Length — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet

holes — Pitch of rivets — 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 — How stayed —

Working pressure of end plates — Area of safety valves to superheater — Are they fitted with easing gear —

## VERTICAL DONKEY BOILER—

No. — Description — Manufacturers of steel —

Made at —

By whom made —

When made —

Where fixed —

Working pressure — tested by hydraulic pressure to —

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 — Stayed by —

Diameter of uptake —

Thickness of uptake plates —

Thickness of water tubes —

The foregoing is a correct description,

Manufacturer. J. H. Riley

1905 Nov. 23-27. Dec. 6-8. 13-19-22-28

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

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " duplicate

Lloyd's Register Foundation

W831-0141



**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*

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...	£	:	:	When applied for.
Special ... ..	£	:	:	6-1 1906
Donkey Boiler Fee ...	£	2	2	When received.
Travelling Expenses (if any) £	:	:	:	12-1 1906

*R.D. Shilston & R.W. Corns.*  
Engineer Surveyors to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 16 FEB 1906

Assigned



© 2020

Lloyd's Register  
Foundation