

# REPORT ON BOILERS.

App. No. 13065.

No. 4688

Port of MIDDLESBROUGH-ON-TEES.

Received at London SAT. 22 SEP 1906

Survey held at Stockton & Date, first Survey April 3 Last Survey 19  
 Book. Donkey Boiler No 2088 for S/S Harpenden (Number of Visits 1)  
 Tons { Gross 3552.54  
 Net 2301.66  
 Built at W Hartlepool By whom built Furness. Withy & Co When built 1906  
 Made at Hartlepool By whom made Richardson Westgarth & Co When made 1906  
 Made at Stockton By whom made J Sinden & Co When made 1906  
 Horse Power 100 Owners Richardson Westgarth & Co Port belonging to Stockton

**VERTICAL TUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.**—Manufacturers of Steel J Spencer & Sons Ltd

For record One. Cyl Tubular Total Heating Surface of Boilers 591 sq ft Is forced draft fitted No No. and Description of

Working Pressure 100 lb Tested by hydraulic pressure to 200 lb Date of test 29-6-06

of Certificate 3709 Can each boiler be worked separately — Area of fire grate in each boiler 26 1/2 sq ft No. and Description of

by valves to each boiler 2 Spring Area of each valve 2.4 sq ft Pressure to which they are adjusted 100 lb

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

Least distance between boilers or uptakes and bunkers or woodwork 18' Dia. of boilers 9'-0" Length 9'-0"

Material of shell plates Steel Thickness 19/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No

Direction of riveting: cir. seams Left to right long. seams Left to right Diameter of rivet holes in long. seams 15/16" Pitch of rivets 3 5/8"

of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint 81.8% Working pressure of shell by

105 lb Size of manhole in shell 16 x 12 Size of compensating ring 5 1/2 x 13 1/4 No. and Description of Furnaces in each

Two. plain Material Steel Outside diameter 2'-8" Length of plain part 5'-10" Thickness of plates 1/2"

Description of longitudinal joint Welded No. of strengthening rings — Working pressure of furnace by the rules 106 lb Combustion chamber

Material Steel Thickness: Sides 17/32" Back 17/32" Top 17/32" Bottom 5/8" Pitch of stays to ditto: Sides 8 x 8 Back 8 1/2 x 7 1/2

8 x 8 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 112 lb Material of stays Iron Diameter at

smallest part 1 1/4" Area supported by each stay 64 sq in Working pressure by rules 111 lb End plates in steam space: Material Steel Thickness 5/8"

of stays 17 x 17 How are stays secured By nuts Working pressure by rules 121 lb Material of stays Iron Diameter at smallest part 4.3"

Area supported by each stay 289 sq in Working pressure by rules 111 lb Material of Front plates at bottom Steel Thickness 5/8" Material of

over back plate Steel Thickness 5/8" Greatest pitch of stays 13 1/2 x 7 1/2 Working pressure of plate by rules 223 lb Diameter of tubes 3"

of tubes 4 1/4 x 4 1/8 Material of tube plates Steel Thickness: Front 55/64" Back 19/32" Mean pitch of stays 9 1/4" Pitch across wide

er spaces 13 1/2" Working pressures by rules 155 lb Girders to Chamber tops: Material Steel Depth and thickness of

ler at centre 5 3/4 x 1 1/4 Length as per rule 1'-10 1/4" Distance apart 8" Number and pitch of Stays in each One 10 1/4"

Working pressure by rules 111 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

Pitch of rivets — Working pressure of shell by rules — Diameter of flue — Material of flue plates — Thickness —

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 —

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 —

of plating — Per centage of strength of joint — Rivets — Working pressure of shell by rules — Thickness of shell crown plates —

Dia. 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 —

Stays — Stayed by — Diameter of uptake — Thickness of uptake plates — Thickness of water tubes —

The foregoing is a correct description, —

Manufacturer J Sinden & Co of Donkey Boiler

Dates { During progress of work in shops —  
 During erection on board vessel —  
 Total No. of visits 12

Is the approved plan of main boiler forwarded herewith —

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

This boiler has been constructed under Special Survey the materials and workmanship are good and efficient and when tested with hydraulic pressure was found tight and satisfactory.

This boiler has now been securely fitted 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. 7 1906
Donkey Boiler Fee ...	£	2	2 : 0	When received.
Travelling Expenses (if any) £		:	:	14. 7 1906

Committee's Minute FRI. 28 SEP 1906

Assigned See minute on 14pl. Rpt

Geo A Milner Thos L Thomson  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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