

## REPORT ON BOILERS.

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

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No. in Survey held at Stockton Date, first Survey July 25 Last Survey Feb. 7 1906.  
 Reg. Book. Donkey Boiler (No. 3526) 5 1/2" Medomsley (Number of Visits 8) Tons Gross 3048  
G. Gibson Master Built at Blyth By whom built Blyth S.B.C. Ltd. When built 1906  
 Engines made at Stockton By whom made Blair & Co. when made 1906  
Donkey Boilers made at Stockton By whom made Riley Bros (Boilermakers) Ltd when made 1905  
 Registered Horse Power Owners F. Garlick & Co. Port belonging to Newcastle

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

(Letter for record (S)) Total Heating Surface of Boilers 750 ft<sup>2</sup> Is forced draft fitted No No. and Description of Boilers One cyl. mult. single ended Working Pressure 100 lb. Tested by hydraulic pressure to 200 lb. Date of test 20.11.05  
 No. of Certificate 3553 Can each boiler be worked separately ✓ Area of fire grate in each boiler 248 ft<sup>2</sup> No. and Description of safety valves Two sprung loaded Area of each valve 4.9 Pressure to which they are adjusted 100 lbs  
 Are they fitted with easing gear Yes 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 1'-6" Int'l Mean dia. of boilers 9'-6" Length 9'-0"  
 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 S.R. Lap long. seams Tub. riv. lap Diameter of rivet holes in long. seams 15/16" Pitch of rivets 3 3/4"  
 Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint rivets 75 plate 75 Working pressure of shell by rules 102.5 Size of manhole in shell 16" x 21" Size of compensating ring 9" x 3/4" No. and Description of Furnaces in each boiler Two plain Material steel Outside diameter 2'-10" Length of plain part top 5'-9 1/2" Thickness of plates crown 9" bottom 7'-9" bottom 16"  
 Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 108 lb. Combustion chamber plates: Material Steel Thickness: Sides 15/32" Back 9/16" Top 15/32" Bottom 5/8" Pitch of stays to ditto: Sides 7" x 9" Back 9" x 10"  
 Top 7" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 103 lb. Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 63" Working pressure by rules 125 End plates in steam space: Material Steel Thickness 27/32"  
 Pitch of stays 16" x 8" How are stays secured On rivets Working pressure by rules 138 Material of stays Steel Diameter at smallest part 2 1/4"  
 Area supported by each stay 288" Working pressure by rules 138 Material of Front plates at bottom Steel Thickness 27/32" Material of Lower back plate steel Thickness 27/32" Greatest pitch of stays 11" x 9" Working pressure of plate by rules 243 Diameter of tubes 3 1/2"  
 Pitch of tubes 4 3/4" x 4 1/2" Material of tube plates Steel Thickness: Front 27/32" Back 9/16" Mean pitch of stays 10 3/8" Pitch across wide water spaces 13 1/2" Working pressures by rules 105 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5 1/2" x 1 1/4" Length as per rule 2'-0" Distance apart 8" Number and pitch of Stays in each two 7"  
 Working pressure by rules 114 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 Plates 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.

Dates of Survey while building

During progress of work in shops - - -  
 During erection on board vessel - - -  
 Total No. of visits 13

1905: July 25. August 28. Sept 12. 14. 25. 27. Nov. 1. 2. 3. 4. 13. 20

Nuc. Feb. 7

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " Yes

W676-0031

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

*This donkey boiler has been built under Special Survey. The materials and workmanship are good and efficient. After satisfactorily withstanding the hydraulic test the boiler 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 ... ..	£	:	:	19
Donkey Boiler Fee ...	£	2	2	When received,
Travelling Expenses (if any) £	:	:	:	7/12/1905

*R.D. Shilston. A.C. Harmer*  
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

TUES. 20 FEB 1906

Assigned



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