

# REPORT ON BOILERS.

Hpl. No. 12843.

No. 4404

NUM. 1 MAR 1906

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

19

No. in Survey held at Stockton Date, first Survey 14<sup>th</sup> Nov. 1905 Last Survey 19  
 Reg. Book. (Number of Visits) \_\_\_\_\_  
 Tons { Gross 39 90.13  
 Net 25 65.95  
 Master J. Holman Built at W. Hartlepool By whom built W. Gray & Co. When built 1906  
 Engines made at W. Hartlepool By whom made General Machine & Work when made 1906  
 Boilers made at W. Hartlepool By whom made General Machine & Work when made 1906  
 Registered Horse Power 258 Owners J. B. Harrison & Co. Port belonging to London

## MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR DONKEY.~~—Manufacturers of Steel John Spence & Son Ltd.

(Letter for record a) Total Heating Surface of Boilers 820 sq ft Is forced draft fitted \_\_\_\_\_ No. and Description of Boilers One Cyl Multitubular Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 26-1-06  
 No. of Certificate 3592 Can each boiler be worked separately  Area of fire grate in each boiler 32 sq ft No. and Description of safety valves to each boiler Two Spring Area of each valve 1.29 sq ft Pressure to which they are adjusted 90 lbs  
 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 \_\_\_\_\_ Dia. of boilers 10'-0" Length 10'-0"  
 Material of shell plates Steel Thickness 19/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams 28 long. seams 28 Diameter of rivet holes in long. seams 15/16" Pitch of rivets 5 1/2"  
 Lap of plates or width of butt straps 6 1/2" Per centages of strength of longitudinal joint \_\_\_\_\_ Working pressure of shell by rules 91.5 lbs Size of manhole in shell 16 x 12 Size of compensating ring 5 1/2 x 13/16 No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-0" Length of plain part \_\_\_\_\_ Thickness of plates \_\_\_\_\_  
 Description of longitudinal joint Welded No. of strengthening rings \_\_\_\_\_ Working pressure of furnace by the rules 90 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 21/32" Pitch of stays to ditto: Sides 8 1/2 x 9 1/2 Back 9 x 9 1/2 Top 9 x 9 1/4 If stays are fitted with nuts or riveted heads Welded Working pressure by rules 94 lbs Material of stays Iron Diameter at smallest part 1.45" Area supported by each stay 85.5 sq in Working pressure by rules 122 lbs End plates in steam space: Material Steel Thickness 13/16" Pitch of stays 8 1/2 x 17 1/2 How are stays secured Welded Working pressure by rules 102 lbs Material of stays Iron Diameter at smallest part 4.3" Area supported by each stay 306.2 sq in Working pressure by rules 105 lbs Material of Front plates at bottom Steel Thickness 13/16" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13 x 9 Working pressure of plate by rules 160 lbs Diameter of tubes 3 1/4" Pitch of tubes 4 3/4 x 4 3/8 Material of tube plates Steel Thickness: Front 13/16" Back 11/16" Mean pitch of stays 11.5" Pitch across wide water spaces 14" Working pressures by rules 103 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 1/4 x 1 1/4 Length as per rule 2-1 1/4 Distance apart 9" Number and pitch of Stays in each One 9 1/4" Working pressure by rules 90 lbs 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 \_\_\_\_\_ 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,  
R. Johnston Manufacturer of Donkey Boilers.

Dates of Survey while building { During progress of work in shops - - - 1905 November 14. Dec. 21  
 { During erection on board vessel - - - 1906 January 4. 24. 26  
 Total No. of visits \_\_\_\_\_  
 Is the approved plan of main boiler forwarded herewith \_\_\_\_\_  
 " " " donkey " " \_\_\_\_\_  
 Lloyd's Register Foundation  
 W664-0176

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

*This boiler has been constructed under special order  
 the materials and workmanship are good & efficient  
 and when tested with hydraulic pressure was found  
 tight and satisfactory.*

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)£	:	:	:	19

*Will be*  
*Geo. A. Wilner*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute

FRI. 2 MAR 1906

Assigned



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 Foundation