

# REPORT ON BOILERS.

App. No. 13044.  
No. 4664

REC'D. 29 AUG 1906

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

No. in Survey held at Stockton Date, first Survey January 20 Last Survey 19  
 Reg. Book. Donkey Boiler No 2070 for W. "Diplom" (Number of Visits) \_\_\_\_\_  
 on the \_\_\_\_\_ Tons } Gross  
 } Net  
 Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_  
 Engines made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_  
 Boilers made at Stockton By whom made J Sudron & Co. Ltd when made 1906  
 Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

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

(Letter for record) Total Heating Surface of Boilers 6044 Is forced draft fitted No. No. and Description of

Boilers One Cyl Multitubular Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 21-6-06

No. of Certificate 3699 Can each boiler be worked separately ✓ Area of fire grate in each boiler 26.5 No. and Description of

safety valves to each boiler 2 Spring Area of each valve 5.74 Pressure to which they are adjusted 90 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 2'-6" Dia. of boilers 9'-0" Length 9'-0"

Material of shell plates Steel Thickness 17/32 Range of tensile strength 28/32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams 2 S Riv long. seams 2 Flat riv Diameter of rivet holes in long. seams 15/16 Pitch of rivets 3 1/2

Lap of plates or width of butt straps 6 1/2 Per centages of strength of longitudinal joint rivets 94% Working pressure of shell by

rules 90 lbs Size of manhole in shell 16 x 12 Size of compensating ring 5 1/2 x 3/4 No. and Description of Furnaces in each

boiler 2 plain Material Steel Outside diameter 2'-9" 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 97 lbs Combustion chamber

plates: Material Steel Thickness: Sides 17/32 Back 9/16 Top 17/32 Bottom 5/8 Pitch of stays to ditto: Sides 9 1/4 x 8 3/16 Back 9 x 9

Top 8 1/2 x 8 3/16 If stays are fitted with nuts or riveted heads Riv heads Working pressure by rules 90 lbs Material of stays Iron Diameter at

smallest part 1 1/4 Area supported by each stay 8 1/2 Working pressure by rules 107 lbs End plates in steam space: Material Steel Thickness 3/4

Pitch of stays 15 1/2 x 1 1/2 How are stays secured 2 x 10 Working pressure by rules 144 lbs Material of stays Iron Diameter at smallest part 5.43

Area supported by each stay 255.7 Working pressure by rules 107 lbs Material of Front plates at bottom Steel Thickness 3/4 Material of

Lower back plate Steel Thickness 3/4 Greatest pitch of stays 13 x 9 Working pressure of plate by rules 146 lbs Diameter of tubes 3"

Pitch of tubes 4 1/4 x 4 1/4 Material of tube plates Steel Thickness: Front 3/4 Back 3/16 Mean pitch of stays 10 1/6 Pitch across wide

water spaces 13 1/2 Working pressures by rules 110.5 lbs Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 5 1/2 x 1 1/4 Length as per rule 22 3/8 Distance apart 8 1/2 Number and pitch of Stays in each One 8 3/16

Working pressure by rules 92 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 \_\_\_\_\_

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, \_\_\_\_\_

THOMAS SUDRON & CO. LIMITED, Manufacturer. J. Sudron

Dates of Survey while building { During progress of work in shops - - - 1906 Jan 20, Feb 29, March 1, 13, 14, 20, 22, April 3, 10, 20, May 4, 22, 30, June 1, 7, 13, 20, 27

{ During erection on board vessel - - -

Total No. of visits \_\_\_\_\_

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " Yes

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

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

This boiler has been securely fastened on  
 board & the safety valves adjusted under steam

Certificate (if required) to be sent to

The amount of Entry Fee...	£	:	:	When applied for.
Special	£	:	:	19
Donkey Boiler Fee	£	2	2	When received.
Travelling Expenses (if any)	£	:	:	1877/06

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

Committee's Minute **FRI. 31 AUG 1906**

Assigned *See Minute on Npl. Rpt*  
*No 13044*

