

REPORT ON BOILERS.

No. 4588

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

MON. 21 MAY 1906

No. in Survey held at *Hickton & Middlesbrough* Date, first Survey *January 4* Last Survey *May 2* 1906
Reg. Book. *51* on the *Donkey Boiler No 2081 of S.S. "Lusitania"*
(Number of Visits *9*) Tons { Gross *5556.57*
Net *3486.64*
Master *B. de Souza Menezes* Built at *Middlesbrough* By whom built *Sir Raylton Dixon & Co. Ltd* When built *1906*
Engines made at *Newcastle* By whom made *R & E Marine Eng Co Ltd* when made *1906*
Boilers made at *do* By whom made *do* when made *1906*
Registered Horse Power Owners *Empresa Nacional de Navegacao* Port belonging to *Lisbon*

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

(Letter for record) Total Heating Surface of Boilers *948 sq ft* Is forced draft fitted *no* No. and Description of Boilers *One Cyl Tubular* Working Pressure *110 lb* Tested by hydraulic pressure to *200 lb* Date of test *2.2.06*
No. of Certificate *3596* Can each boiler be worked separately *no* Area of fire grate in each boiler *34 sq ft* No. and Description of safety valves to each boiler *Two direct spring* Area of each valve *9.62 sq in* Pressure to which they are adjusted *100 lb*
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 *21 in* Dia. of boilers *10-6* Length *10-0*
Material of shell plates *Steel* Thickness *2 1/32* 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 Riv* Diameter of rivet holes in long. seams *15/16* Pitch of rivets *5/8*
Lap of plates or width of butt straps *6 1/2* Per centages of strength of longitudinal joint rivets *74.8%* Working pressure of shell by rules *101 lb* plate *74.3%*
Size of manhole in shell *16 x 12* Size of compensating ring *6 x 27/32* No. and Description of Furnaces in each boiler *Two plain* Material *Steel* Outside diameter *3-2* Length of plain part *6-8* Thickness of plates crown *9/16* bottom *9/16*
Description of longitudinal joint *Welded* No. of strengthening rings *no* Working pressure of furnace by the rules *111 lb* Combustion chamber plates: Material *Steel* Thickness: Sides *2 1/32* Back *1 9/32* Top *2 1/32* Bottom *9/16* Pitch of stays to ditto: Sides *9 1/2 x 9* Back *9 x 8 1/2* Top *8 1/2 x 9* If stays are fitted with nuts or riveted heads *Riveted* Working pressure by rules *110 lb* Material of stays *Iron* Diameter at smallest part *1.45 in* Area supported by each stay *85.5 sq in* Working pressure by rules *101 lb* End plates in steam space: Material *Steel* Thickness *2 3/32* Pitch of stays *14 x 14 1/4* How are stays secured *2 x W* Working pressure by rules *116 lb* Material of stays *Iron* Diameter at smallest part *3.45 in* Area supported by each stay *199.5 sq in* Working pressure by rules *120 lb* Material of Front plates at bottom *Steel* Thickness *2 3/32* Material of Lower back plate *Steel* Thickness *2 3/32* Greatest pitch of stays *13 x 9* Working pressure of plate by rules *136 lb* Diameter of tubes *3 1/4* Pitch of tubes *4 5/8 x 4 3/16* Material of tube plates *Steel* Thickness: Front *2 3/32* Back *3/4* Mean pitch of stays *11.46* Pitch across wide water spaces *13 3/4* Working pressures by rules *119 lb* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *6 1/2 x 1 1/4* Length as per rule *24.2* Distance apart *8 1/2* Number and pitch of Stays in each *One 9* Working pressure by rules *116 lb* Superheater or Steam chest; how connected to boiler *None* Can the superheater be shut off and the boiler worked separately *no* Diameter *no* Length *no* Thickness of shell plates *no* Material *no* Description of longitudinal joint *no* Diam. of rivet holes *no* Pitch of rivets *no* Working pressure of shell by rules *no* Diameter of flue *no* Material of flue plates *no* Thickness *no* Stiffened with rings *no* Distance between rings *no* Working pressure by rules *no* End plates: Thickness *no* How stayed *no* Working pressure of end plates *no* Area of safety valves to superheater *no* Are they fitted with easing gear *no*

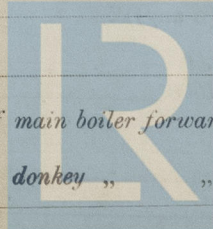
VERTICAL DONKEY BOILER—No. Description Manufacturers of steel
Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted If fitted with 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 of Donkey boiler.

Dates { During progress of work in shops - - }
Survey { During erection on board vessel - - - }
while building { Total No. of visits }
1906 January 4. 10. 24. 26. February 2
March 21. 22 April 24 May 3
9

Is the approved plan of main boiler forwarded herewith

" " " donkey " "



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W1514-0011

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 fitted and secured on board and tried under steam.*

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	£	:	:	2 3 1906
Donkey Boiler Fee	£	2	2	When received,
Travelling Expenses (if any) £	:	:	:	5 3 1906

R.D. Philston Geo A. Milner
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

TUES. 22 MAY 1906

Committee's Minute

Assigned

*See Minute on
Inve. Rpt. No. 50737*



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