

Appl No. 13120.  
No. 4813

THUR. NOV 15 1906

# REPORT ON BOILERS.

pt. 5.

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

No. in Survey held at Darlington Date, first Survey Sept 3 Last Survey 19  
 (Number of Visits) \_\_\_\_\_  
 Description of Safety Reg. Book. Supp on the Donkey Boiler (No 103) 11 "Dirphys" Tons { Gross 2794.79  
 Net 1799.91  
 Master Cap Pappacostandopoulos Built at Warrington By whom built W Kay & Co When built 1906  
 Engines made at West Hartlepool By whom made Central Marine Engine Works. when made 1906  
 Rivets \_\_\_\_\_ Plates \_\_\_\_\_  
 Boilers made at Darlington By whom made Blake Boiler Wagon & Eng. Co. Ltd when made 1906  
 Registered Horse Power \_\_\_\_\_ Owners Nav à Vapeur Panhellénique Port belonging to Sirius

Checked 750

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

Letter for record (S) Total Heating Surface of Boilers 1780 sq ft Is forced draft fitted \_\_\_\_\_ No. and Description of Boilers One Cyl. Multi single ended Working Pressure 80 lb Tested by hydraulic pressure to 160 lb Date of test 20-10-06  
 No. of Certificate 3790 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler 30 sq ft No. and Description of safety valves to each boiler \_\_\_\_\_ Area of each valve 8.29" Pressure to which they are adjusted 85 lb  
 Are they fitted with easing gear In 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 \_\_\_\_\_ Mean dia. of boilers 10'-0" Length 10'-0"  
 Material of shell plates Steel Thickness 3/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No  
 Descrip. of riveting: cir. seams SR lap long. seams J.R. Lap Diameter of rivet holes in long. seams 15" 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 84.6 Working pressure of shell by rules 92 lb Size of manhole in shell 12" x 16" Size of compensating ring 7" x 5/8" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3'-0" Length of plain part top 6'-2" Thickness of plates crown 9" bottom 16"  
 Description of longitudinal joint welded No. of strengthening rings 1 Working pressure of furnace by the rules 90 Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 5/8" Pitch of stays to ditto: Sides 9 1/2" x 12" Back 9 1/2" x 10"  
 Top 10" x 13" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 93 Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 160" Working pressure by rules 107 End plates in steam space: Material Steel Thickness 2 1/4" double  
 Pitch of stays 1'-8" x 1'-8" How are stays secured Direct Working pressure by rules 93 Material of stays Steel Diameter at smallest part 2 1/2"  
 Area supported by each stay 390" Working pressure by rules 110 Material of Front plates at bottom Steel Thickness 3/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 12 1/2" x 9 1/2" Working pressure of plate by rules 119 Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 2 1/32" Back 5/8" Mean pitch of stays 11 1/4" Pitch across wide water spaces 14 1/4" Working pressures by rules 81 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7" x 1 3/8" Length as per rule 2'-6" Distance apart 13" Number and pitch of Stays in each 2 10"  
 Working pressure by rules 85 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 \_\_\_\_\_ Date of test \_\_\_\_\_ 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 \_\_\_\_\_ Radius of do. \_\_\_\_\_ Stayed by \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_  
 Thickness of water tubes \_\_\_\_\_

The foregoing is a correct description, FOR BLAKE BOILER, WAGON & ENGINEERING CO. LIMITED.

James Blake  
MANAGING DIRECTOR.

Dates of Survey while building { During progress of work in shops -- } 1906. Sept 3, 14, 19, 24, 25, 29. Oct 11, 15, 17, 19, 20  
 { During erection on board vessel - - - } \_\_\_\_\_  
 Total No. of visits \_\_\_\_\_

Is the approved plan of main boiler forwarded herewith \_\_\_\_\_  
 " " " donkey " " " " \_\_\_\_\_

Lloyd's Register Foundation

002970-002977-0083

**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 despatched for fitting on board.

This boiler has now been efficiently fitted on board

Certificate (if required) to be sent to

The amount of Entry Fee...	£	:	:	When applied for.
Special ...	£	:	:	18
Donkey Boiler Fee ...	£	2	: 2	When received.
Travelling Expenses (if any) £	:	:	:	

*will be*

*R.D. Shilston James Jones*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

FRI. NOV 16 1906

Committee's Minute

Assigned



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 Foundation