

REPORT ON BOILERS.

No. 493

Port of MIDDLESBROUGH-ON-TEES.

Received at London Office

THUR. 18 OCT 1906

No. in Survey held at Stockton

Reg. Book.

Date, first Survey July 31

Last Survey Oct. 2 1906

(Number of Visits 16)

on the Donkey Boiler (No 3633) for S.S. "Millpool"

Tons } Gross 4218
Net 2404

Master Owen Owens Built at Stockton

By whom built Hopner & Son

When built 1906

Engines made at Stockton

By whom made Polin & Co

when made 1906

Boilers made at Stockton

By whom made Riley Bros Ltd

when made 1906

Registered Horse Power

Owners The Coal Shipping Firm (Hopner & Sons)

Port belonging to West Hartlepool

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

(Letter for record) Total Heating Surface of Boilers 990 sq ft Is forced draft fitted No No. and Description of Boilers One Cyl. Multi single ended Working Pressure 100 lb. Tested by hydraulic pressure to 200 lb. Date of test 30-8-06

No. of Certificate 3750 Can each boiler be worked separately ✓ Area of fire grate in each boiler 29 sq ft No. and Description of safety valves to each boiler Two, Spring Area of each valve 7.07 sq ft Pressure to which they are adjusted 100 lb.

Are they fitted with easing gear No 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 1/2 Inlet Mean dia. of boilers 10'-9" Length 10'-0"

Material of shell plates Steel Thickness 5/8" Range of tensile strength 27/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams DR Lap long. seams DR DBS Diameter of rivet holes in long. seams 1/8" Pitch of rivets 4"

Lap of plates or width of butt straps 9 1/2 x 5/8" Per centages of strength of longitudinal joint rivets 82 Working pressure of shell by rules 102 lb. Size of manhole in shell 16" x 21" Size of compensating ring 9" x 3/4" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3'-0" Length of plain part top 6'-2 1/2" Thickness of plates crown 1/2" bottom 3/32"

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 141 Combustion chamber plates: Material Steel Thickness: Sides 17/32" Back 17/32" Top 1/2" Bottom 5/8" Pitch of stays to ditto: Sides 9 x 9" Back 9 x 8 1/2"

Top 8 x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 111 Material of stays Iron Diameter at smallest part 1 3/8" Area supported by each stay 89.25 sq in. Working pressure by rules 107 End plates in steam space: Material Steel Thickness 3/32"

Pitch of stays 16 1/2 x 19 1/4" How are stays secured DR riv. stay Working pressure by rules 107 Material of stays Iron Diameter at smallest part 2 5/8" Area supported by each stay 330 sq in. Working pressure by rules 123 Material of Front plates at bottom Steel Thickness 27/32" Material of Lower back plate Steel Thickness 27/32" Greatest pitch of stays 12 x 8 1/2" Working pressure of plate by rules 227 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/8 x 4 5/8" Material of tube plates Steel Thickness: Front 27/32" Back 19/32" Mean pitch of stays 10 5/32" Pitch across wide water spaces 13 1/2" Working pressures by rules 123 lb. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 6 x 1 1/4" Length as per rule 2'-3" Distance apart 7 1/2" Number and pitch of Stays in each Two 8"

Working pressure by rules 115 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,

A. J. [Signature] Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1906 July 31, Aug 3, 8, 9, 11, 13, 16, 17, 28, 30; During erection on board vessel -- Sept. 7, 17, 20, 21, 26, Oct. 2; Total No. of visits 16

Is the approved plan of main boiler forwarded herewith ✓ " " " donkey " " Yes



W556-0005

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*

Certificate (if required) to be sent to

The amount of Entry Fee...	£	:	When applied for.
Special	£	:	7.9.1906
Donkey Boiler Fee ...	£	2 : 2	When received.
Travelling Expenses (if any) £	:	:	11.9.1906

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

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Committee's Minute FRI. 19 OCT 1906

Assigned



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Foundation