

REPORT ON BOILERS.

Hpl. No. 12776

No. 49390.

THUR. 30 NOV 1905

Port of *Newcastle-on-Tyne.*

Received at London Office

19

No. in
Reg. Book.
Supplement
52 on theSurvey held at *Newcastle-on-Tyne.*Date, first Survey *July 19*

Last Survey

Aug 30 1905(Number of Visits *7*)*S.S. "Glan Macpherson"*Master *S. Beer* 79. 05. Built at *West Hartlepool* By whom built *Furness, Withy & Co. Ltd.*Engines made at *Hartlepool*By whom made *Richardsons Westgarth & Co. Ltd.*When built *1905*Boilers made at *Hebburn.*By whom made *R. Stephenson & Co. Ltd.*when made *1905*Nominal
Registered Horse Power *448*Owners *Bayzer, Irvine & Co.*when made *1906.*Port belonging to *Glasgow*

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel

J. Spencer & Sons.

(Letter for record

Total Heating Surface of Boilers *1250 ft².*

Is forced draft fitted

No.

No. and Description of

Boilers *One, S. E. multitubular*Working Pressure *100 lbs.*Tested by hydraulic pressure to *200 lbs.*Date of test *30/8/05.*No. of Certificate *7043.* Can each boiler be worked separately ☒Area of fire grate in each boiler *30 ft².*

No. and Description of

safety valves to each boiler *Two spring loaded*Area of each valve *5.94"*Pressure to which they are adjusted *104 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 *18"*Mean dia. of boilers *11'-3"*Length *9'-1 7/16"*Material of shell plates *Steel.*Thickness *7/16"*Range of tensile strength *28-32.*Are the shell plates welded or flanged *No.*Descrip. of riveting: cir. seams *Double Single* long. seams *Double R. Lap.*Diameter of rivet holes in long. seams *15/16"*Pitch of rivets *4 1/4"*Lap of plates *width of butt straps**6 7/8"*

Per centages of strength of longitudinal joint

rivets *80.3.*

Working pressure of shell by

rules *105 lbs.* Size of manhole in shell *16" x 12"*Size of compensating ring *7 1/2" x 16"*

No. and Description of Furnaces in each

boiler *Two, plain.* Material *Steel*Outside diameter *3'-0 5/8"*

Length of plain part

top *5'-10 1/2"*bottom *6'-2 3/4"*

Thickness of plates

crown *1 1/2"*bottom *1 1/2"*Description of longitudinal joint *0. Butt.*No. of strengthening rings *—*Working pressure of furnace by the rules *104 lbs.*

Combustion chamber

plates: Material *Steel.* Thickness: Sides *9/16"*Back *9/16"*Top *9/16"*Bottom *7/16"*Pitch of stays to ditto: Sides *8 1/2"*Back *8 3/4" x 8 1/2"*Top *9 1/2"* If stays are fitted with nuts or riveted heads *Riveted heads*Working pressure by rules *108 lbs.*Material of stays *Iron.*

Diameter at

smallest part *1 3/8" x 1 1/2"* Area supported by each stay *74.3"*Working pressure by rules *121 lbs.*End plates in steam space: Material *Steel.*Thickness *23/32"*Diameter at smallest part *3.26"*Pitch of stays *15" x 15"* How are stays secured *0. Ruled W.*Working pressure by rules *108 lbs.*Material of stays *Iron.*Diameter at smallest part *3.26"*Area supported by each stay *225"*Working pressure by rules *108 lbs.*Material of Front plates at bottom *Steel.*Thickness *23/32"*

Material of

Lower back plate *Steel.* Thickness *23/32"*Greatest pitch of stays *12"*Working pressure of plate by rules *119 lbs.*Diameter of tubes *3"*Pitch of tubes *4 1/4" x 4 1/4"*Material of tube plates *Steel.* Thickness: Front *23/32"*Back *7/16"*Mean pitch of stays *10 5/8"*

Pitch across wide

water spaces *13 1/2"*Working pressures by rules *101 lbs.*Girders to Chamber tops: Material *Steel.*

Depth and thickness of

girder at centre *6 1/2" x 1 1/8"*Length as per rule *2'-1"*Distance apart *9 1/2"*Number and pitch of Stays in each *One.*Working pressure by rules *104 lbs.*Superheater or Steam chest: how connected to boiler *—*

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,

Manufacturer.

Dates of Survey while building

During progress of work in shops - *1905. July 19. Aug. 28. 16. 21. 28. 30.*

During erection on board vessel - *—*

Total No. of visits *7*

Is the approved plan of main boiler forwarded herewith *Yes*

"

"

"

donkey

"

"

"

No.

W 953-0114

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

Boiler constructed under Special Survey, materials & workmanship good and efficient.

Certificate (if required) to be sent to

The amount of Entry Fee...	£	2 : 2	When applied for.
Special ...	£	:	6 th Sep 1905
Donkey Boiler Fee ...	£	:	When received. H.O.
Travelling Expenses (if any) £	:	:	15 th Sep 1905

Committee's Minute

FRI. 1 DEC 1905

Assigned

H. G. Dearden & A. J. Graham.
Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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Foundation