

Rpt. 5.

REPORT ON BOILERS.

No. 49506.

Sl. No. 22580

Port of *Newcastle*

Received at London Office

FRI. 5 JAN 1906

No. in Reg. Book.

Survey held at

Gateshead

Date, first Survey *13 Feb*

Last Survey *11 Oct*

1905

(Number of Visits *4*)

Tons } Gross *1984.63*
Net *1243.56*

on the *Steel Screw Steamer "Needwood"*

Master *David Jones* Built at *Sunderland* By whom built *Osbourne Graham & Co 8/3/124* When built *1905*

Engines made at *Sunderland* By whom made *R. C. Marine Eng. Co. Ltd.* when made *1905*

Donkey Boilers made at *Gateshead* By whom made *Clarke Chapman & Co* when made *1905*

Registered Horse Power Owners *W. France Fenwick & Co. Ltd.* Port belonging to *London*

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel

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

Working Pressure Tested by hydraulic pressure to Date of test

No. of Certificate Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to each boiler

Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length

Material of shell plates Thickness Range of tensile strength Are the shell plates welded or flanged

Descrip. of riveting: cir. seams long seams Diameter of rivet holes in long. seams Pitch of rivets

Lap of plates or width of butt straps Per centages of strength of longitudinal joint rivets Working pressure of shell by plate

rules Size of manhole in shell Size of compensating ring No. and Description of Furnaces in each boiler

Material Outside diameter Length of plain part top Thickness of plates crown bottom

Description of longitudinal joint No. of strengthening rings Working pressure of furnace by the rules Combustion chamber

plates: Material Thickness: Sides Back Top Bottom Pitch of stays to ditto: Sides Back

Top If stays are fitted with nuts or riveted heads Working pressure by rules Material of stays Diameter at smallest part

Area supported by each stay Working pressure by rules End plates in steam space: Material Thickness

Pitch of stays How are stays secured Working pressure by rules Material of stays Diameter at smallest part

Area supported by each stay Working pressure by rules Material of Front plates at bottom Thickness Material of Lower back plate

Thickness Greatest pitch of stays Working pressure of plate by rules Diameter of tubes

Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays Pitch across wide water spaces

Working pressures by rules Girders to Chamber tops: Material Depth and thickness of girder at centre

Length as per rule Distance apart Number and pitch of Stays in each

Working pressure by rules 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. *1* Description *Hy. Back* Manufacturers of steel *J. Spence & Sons*

Made at *Gateshead* By whom made *Clarke Chapman & Co* When made *11/10/05* Where fixed *Stokehold*

Working pressure *80 lbs* tested by hydraulic pressure to *160 lbs* No. of Certificate *7100* Fire grate area *23 1/2* Description of safety valves *Direct spring*

No. of safety valves *Two* Area of each *7.07* Pressure to which they are adjusted *80 lbs*. If fitted with easing gear *Yes*. If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *6'-6"* Length *14'-0"* Material of shell plates *Steel* Thickness *7/16"* Range of tensile strength *27-32*

Descrip. of riveting long. seams *Lap* Dia. of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *3 3/16"*

Lap of plating *4 1/2"* Per centage of strength of joint Rivets *73.7* Working pressure of shell by rules *90 lbs* Thickness of shell crown plates *9/16"*

Radius of do. *5'-0"* No. of Stays to do. *6* Dia. of stays *1 1/2"* Diameter of furnace Top *2'-9"* Bottom *5'-6"* Length of furnace *✓*

Thickness of furnace plates *9/16"* Description of joint *Lap* Working pressure of furnace by rules *✓* Thickness of furnace crown plates *9/16"* Stayed by *✓* Diameter of tubes *2 1/2"* Thickness of uptake plates *1/16"* Thickness of stay tubes *1/4"*

The foregoing is a correct description,
FOR CLARKE CHAPMAN & CO. Manufacturer.

Dates of Survey while building } During progress of work in shops - - } *1905. Feb. 13. 23. June 1. Oct 11*
} During erection on board vessel - - - }
Total No. of visits *4*

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

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

This donkey boiler has been constructed under special survey & the materials & workmanship are found to be good.

The Boiler was examined under steam & its Safety Valves have been adjusted under steam to their working pressure.

W. Field

(The Surveys are registered and for a certificate to be sent to Committee's Minute.)

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

Monthly account

Thomas Field
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

TUES. 9 JAN 1906

Committee's Minute

Assigned



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