

## REPORT ON BOILERS.

U.S. No. 23181

U.S. No. 22503

MUN. 6 NOV 1905

Port of

Glasgow.

Received at London Office

No. in Survey held at  
Reg. Book.

Annan

Date, first Survey 4<sup>th</sup> January, 1905 Last Survey 25<sup>th</sup> October 1905

(Number of Visits 38)

on the

c/s "Collingwood"

Tons { Gross 1277.56  
Net 816.41

Master J. M. Harrison Built at Sunderland By whom built Osbourne, Graham &amp; Co. When built 1905

Engines made at Sunderland By whom made Richardson Westgarth &amp; Co. When made 1905

Boilers made at By whom made when made

Registered Horse Power

Owners Furness Withy &amp; Co. Ltd

Port belonging to Newcastle-on-Tyne

## 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 plate Working pressure of shell by 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 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. One Description Lochran's Manufacturers of steel Parkhead.

Made at Annan By whom made Lochran &amp; Co. Annan When made 1905 Where fixed stockhold (strains)

Working pressure 80 tested by hydraulic pressure to 160 No. of Certificate 7659 Fire grate area 19<sup>sq ft</sup> Description of safety valves Direct springNo. of safety valves Two Area of each 7.07<sup>sq ft</sup> Pressure to which they are adjusted 80<sup>lb</sup> If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler no

Dia. of donkey boiler 6' 0" Length 12' 0" Material of shell plates steel Thickness 7/16" Range of tensile strength 24-32

Descrip. of riveting long. seams double Dia. of rivet holes 25/32 Whether punched or drilled drilled Pitch of rivets 25/8

Lap of plating 3 3/8 Per centage of strength of joint Rivets 70.94 Plates 70.24 Working pressure of shell by rules 95 lbs Thickness of shell crown plates 1/2"

Radius of do. 6' 6" No. of Stays to do. 4 Dia. of stays fusset 1/2" Radius Diameter of furnace Top 8' 6" Bottom Length of furnace

Thickness of furnace plates 7/16 Description of joint riveted Working pressure of furnace by rules 87 lbs Thickness of furnace crown plates 1/2"

Stayed by Diameter of tubes 2 1/2 Thickness of tube plates 5/8 + 5/8 Thickness of stay tubes 1/4

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1905: July 31, Aug 18, Sep 8, 15, 22, 29  
During erection on board vessel - - -  
Total No. of visits 6

Is the approved plan of main boiler forwarded herewith

" donkey "

yes

no

002978-002988-0160

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**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c. This boiler has been constructed & tested under Special Survey, in my opinion, it is eligible to be classed with the machinery of this vessel when it has been fittted on board, mounted & safety valves adjusted.

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 ... ..	£	:	:	19
Donkey Boiler Fee ...	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	19

Committee's Minute

FRI. 10 NOV 1905

Assigned

*J. W. Dimmock*  
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.



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