

# 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 1<sup>st</sup> January, 1905 Last Survey 25<sup>th</sup> October 1905

(Number of Visits 38)

on the

c/o "Collingwood"

Tons } Gross 1277.56  
Net 816.41

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

Engines made at Sunderland By whom made Richardson Westgarth & Co. Ltd. when made 1905

Boilers made at \_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners Furness Withy & 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
No. of Certificate	Working Pressure	Tested by hydraulic pressure to	Date of test
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
Are they fitted with easing gear	In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler	Pressure to which they are adjusted	
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	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	Thickness of plates
Description of longitudinal joint	No. of strengthening rings	Working pressure of furnace by the rules	Combustion chamber
Material	Thickness	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 & 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 spring

No. of safety valves Two Area of each 7.07<sup>sq ft</sup> Pressure to which they are adjusted 80 lb If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler no

Dia. of donkey boiler 6" 0" Length 18" 0" Material of shell plates steel Thickness 7/16" Range of tensile strength 27-38

Descrip. of riveting long. seams double Dia. of rivet holes 25/32" Whether punched or drilled drilled Pitch of rivets 2 5/8"

Lap of plating 3 3/8" Per centage of strength of joint 70.94 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 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 uptake 2 1/2" Thickness of uptake 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, 27, 29
During erection on board vessel - - -	
Total No. of visits	<u>6</u>

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " no



**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 Surveys 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

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

Committee's Minute  
 Assigned

FRI. 10 NOV 1905