

## REPORT ON BOILERS.

No. 15901

WED. 26 OCT 1910

Received at London Office

Date of writing Report

19

When handed in at Local Office

23/9/1910.

Port of Greenock.

No. in

Survey held at

Greenock.

Date, First Survey

22<sup>nd</sup> Dec. 1909.

Last Survey

22<sup>nd</sup> Sept. 1910

Reg. Book.

on the SCREW STEAMER "HIGHLAND GLEN."

(Number of Visits)

71

Gross

7343

Tons

Net 4616

Master Curtis.

Built at Port Glasgow.

By whom built Russell &amp; Co.

When built 1910.

Engines made at

Greenock.

By whom made Rankin &amp; Blackmore

when made

1910.

Boilers made at

Greenock.

By whom made Rankin &amp; Blackmore

when made

1910.

Registered Horse Power

Owners Nelson Line (London) Ltd.

Port belonging to London.

MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY OR DONKEY. — Manufacturers of Steel & Colville & Sons

(Letter for record S) Total Heating Surface of Boilers 3050 sq. ft. Is forced draft fitted No. No. and Description of

Boilers two cylindrical built single end. Working Pressure 210 lbs. Tested by hydraulic pressure to 420 lbs. Date of test 16/5/10.

No. of Certificate 970. Can each boiler be worked separately Yes. Area of fire grate in each boiler 87.57 sq. ft. No. and Description of

safety valves to each boiler 2: One Spring loaded. Area of each valve 8.29 sq. in. Pressure to which they are adjusted 215 lbs.

Are they fitted with easing gear Yes. 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 14 in. Mean dia. of boilers 17' 0". Length 12' 0".

Material of shell plates Steel. Thickness 1 1/8". Range of tensile strength 31 to 33 tons. Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams Lap Double and long. seams Double Butt Straps. Diameter of rivet holes in long. seams 1 1/8". Pitch of rivets 10". 5".

Top of plates or width of butt straps 1' 11 1/2". Per centages of strength of longitudinal joint rivets 98.5. Working pressure of shell by

rules 245 lbs. Size of manhole in shell 16" x 12". Size of compensating ring 31 3/4" x 27 1/4" x 1 1/8". No. and Description of Furnaces in each

boiler 4: Morrison. Material Steel. Outside diameter 46 1/2". Length of plain part top 7' 7". Thickness of plates crown 2 1/2". bottom 3 1/2".

Description of longitudinal joint Weld. No. of strengthening rings None. Working pressure of furnace by the rules 232 lbs. Combustion chamber

plates: Material Steel. Thickness: Sides 5/8". Back 5/8". Top 1/2". Bottom 1/2". Pitch of stays to ditto: Sides 8 1/4" x 7". Back 8" x 7 1/2".

Top 10 1/2" x 6". If stays are fitted with nuts or riveted heads Nuts. Working pressure by rules 215 lbs. Material of stays Steel. Diameter at

smallest part 1 1/2". Area supported by each stay 63 1/2". Working pressure by rules 215 lbs. End plates in steam space: Material Steel. Thickness 1 1/2".

Pitch of stays 17" x 18". How are stays secured Double Nuts &amp; Washers. Working pressure by rules 231 lbs. Material of stays Steel. Diameter at smallest part 3.06"

Area supported by each stay 306". Working pressure by rules 247 lbs. Material of Front plates at bottom Steel. Thickness 8". Material of

Lower back plate Steel. Thickness 8". Greatest pitch of stays 12 1/2". Working pressure of plate by rules 207 lbs. Diameter of tubes 3 1/4".

Pitch of tubes 4 1/2" x 4 3/4". Material of tube plates Steel. Thickness: Front 8" both 1/8". Back 7/8". Mean pitch of stays 9". Pitch across wide

water spaces 13 3/4". Working pressures by rules 280 lbs. 340 lbs. Girders to Chamber tops: Material Steel. Depth and thickness of

girder at centre 11 1/2" x 1 5/8". Length as per rule 37 1/2". Distance apart 10 1/2". Number and pitch of Stays in each 4: 6".

Working pressure by rules 223 lbs. 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

The foregoing is a correct description.

Rankin &amp; Blackmore

Manufacturer.

Is the approved plan of boiler forwarded herewith Yes.

Total No. of visits 71.

Dates of Survey

During progress of work in shops - -

while building

During erection on board vessel - - -

See accompanying report.

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

This Boiler was built under special survey and the materials and workmanship are good. On completion it was tested as required by the Rules. For recommendations see preceding sheet.

Survey Fee

£

When applied for

19

Travelling Expenses (if any) £

When received

19

Wm. R. Austin

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

Committee's Minute GLASGOW 25 OCT. 1910

Assigned See minute on machinery report