

Rpt. 5a.

# REPORT ON BOILERS.

No. 16402

WED. MAR. 12. 1913

Received at London Office

Date of writing Report

101

When handed in at Local Office

21/2/1913 Port of Greenock

on of Safety

No. in Survey held at Greenock

Date, First Survey 28<sup>th</sup> Dec. 1911 Last Survey 21<sup>st</sup> July 1913

Reg. Book.

"

(Number of Visits 74)

Gross 11,118

on the TWIN SCREW STEAMER "BENALLA."

Net 7,026

Master

Built at Greenock

By whom built David Robt. Linn

When built 1913

Engines made at Greenock

By whom made

David Robt. Linn

When made 1913

Boilers made at Greenock

By whom made

David Robt. Linn

When made 1913

Registered Horse Power

Owners Peninsular & Oriental S. Nav. Co.

Port belonging to Greenock

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

(Letter for record S.) Total Heating Surface of Boilers 6264 sq. ft. Is forced draft fitted Yes. No. and Description of

Boilers 2: Cylindrical: Single Working Pressure 215 lbs. Tested by hydraulic pressure to 420 lbs. Date of test 5/11/12.

No. of Certificate 1083. Can each boiler be worked separately Yes. Area of fire grate in each boiler 73 sq. ft. No. and Description of

safety valves to each boiler 2: Direct, Spring Loaded. Area of each valve 8.29 sq. in. Pressure to which they are adjusted 220 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 about 14". Mean dia. of boilers 16' 6" Length 11' 8"

Material of shell plates Steel Thickness 1 3/32" Range of tensile strength 30 tons Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams Lap Double Rivet long. seams Dble. Rivet Straps Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 10 1/2" 5 1/2"

Lap of plates or width of butt straps 24 1/2" Per centages of strength of longitudinal joint rivets 95.2 Working pressure of shell by

rules 253 lbs. Size of manhole in shell 16" x 12". Size of compensating ring 8 1/4" x 1 3/32" No. and Description of Furnaces in each

boiler 4: Morrison's Material Steel Outside diameter 43 1/4" Length of plain part 8' 2" Thickness of plates crown 5" bottom 8"

Description of longitudinal joint Weld. No. of strengthening rings none Working pressure of furnace by the rules 233 lbs. Combustion chamber

plates: Material Steel Thickness: Sides 5" Back 5" Top 4 3/4" Bottom 1" Pitch of stays to ditto: Sides 7 1/4" x 8" Back 7 1/4" x 8"

Top 8" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 218 lbs. Material of stays Steel Diameter at

smallest part 1 1/2" Area supported by each stay 68 sq. in. Working pressure by rules 237 lbs. End plates in steam space: Material Steel Thickness 1 1/4"

Pitch of stays 18 1/4" x 16 1/2" How are stays secured Dble. nuts Working pressure by rules 237 lbs. Material of stays Steel Diameter at smallest part 3 3/16"

Area supported by each stay 309 sq. in. Working pressure by rules 264 lbs. Material of Front plates at bottom Steel Thickness 1 3/16" Material of

Lower back plate Steel Thickness 1 3/16" Greatest pitch of stays 12" Working pressure of plate by rules 228 lbs. Diameter of tubes 2 1/2"

Pitch of tubes 5 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 1 1/4" Back 3/4" Mean pitch of stays 8.3" Pitch across wide

water spaces 13 1/2" Working pressures by rules 292 lbs. 293 lbs. Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 10 1/2" x 1 1/2" Length as per rule 32.8" Distance apart 8 1/2" Number and pitch of Stays in each 3: 8"

Working pressure by rules 257 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,

FOR CAIRD AND COMPANY, LIMITED,

Manufacturer.

Dates of Survey During progress of work in shops - -  
while building During erection on board vessel - -

See accompanying report

Is the approved plan of boiler forwarded herewith

Total No. of visits 74

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

This Boiler has been built under special survey and the materials and workmanship are good. For recommendations see accompanying sheet.

Survey Fee ... £ : : When applied for, 191

Travelling Expenses (if any) £ : : When received, 191

Committee's Minute

GLASGOW

11 MAR. 1913

Assigned See minute on accompanying machinery report.

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

WED. MAR. 26. 1913

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Foundation