

Rpt. 5a.

REPORT ON BOILERS.

No. 31511

WED. JUN. 5 - 1912

Received at London Office

Date of writing Report

19

When handed in at Local Office

1/6/12 Port of Glasgow

No. in Survey held at

Glasgow

Reg. Book.

on the

1/5 Benefactor

Date, First Survey

6th October 1911

Last Survey

23rd May 1912

(Number of Visits 34)

Gross 5511

Net 3499

Master J. R. Atkinson

Built at

Glasgow

By whom built

D. W. Henderson & Co. Ltd

When built 1912

Engines made at

Glasgow

By whom made

do

when made 1912

Boilers made at

do

By whom made

do

when made 1912

Registered Horse Power 536

Owners J. & J. Harrison

Port belonging to Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel W. Beardmore & Co.

(Letter for record 5) Total Heating Surface of Boilers 1388 ft^2 Is forced draft fitted no No. and Description ofBoilers one single ended Working Pressure 215 $\text{lb}/\text{sq. in.}$ Tested by hydraulic pressure to 430 $\text{lb}/\text{sq. in.}$ Date of test 18.3.12No. of Certificate 11487 Can each boiler be worked separately yes Area of fire grate in each boiler 51 ft^2 No. and Description ofsafety valves to each boiler 2 spring loaded Area of each valve 4.9 sq. in. Pressure to which they are adjusted 215 $\text{lb}/\text{sq. in.}$

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 15" Mean dia. of boilers 13'-0" Length 10'-11"

Material of shell plates steel Thickness $1\frac{1}{8}$ " Range of tensile strength 28/32 tons Are the shell plates welded or flanged noDescrip. of riveting: cir. seams DR lap long. seams DBS. TR Diameter of rivet holes in long. seams $1\frac{1}{8}$ " Pitch of rivets $9\frac{1}{8}$ "Lap of plates or width of butt straps $2\frac{1}{2}$ " Per centages of strength of longitudinal joint rivets 85 Working pressure of shell byrules 251 Size of manhole in shell 20" x 16" Size of compensating ring 31" x 27" x $1\frac{1}{8}$ " No. and Description of Furnaces in each

boiler 3 Morison bulb Material steel Outside diameter 41 7/8" Length of plain part top Thickness of plates crown 1 1/2"

Description of longitudinal joint welded No. of strengthening rings — Working pressure of furnace by the rules 218 Combustion chamber

plates: Material steel Thickness: Sides 1 1/8" Back 1 1/8" Top 1 1/8" Bottom 1" Pitch of stays to ditto: Sides 8 1/2" x 8 1/2" Back 8 1/2" x 8 1/2"

Top 9" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 215 Material of stays steel area

smallest part 1.99 Area supported by each stay 76.5" Working pressure by rules 234 End plates in steam space: Material steel Thickness 1 3/8"

Pitch of stays 20 1/2" x 18 1/2" How are stays secured DN Working pressure by rules 222 Material of stays steel area

Area supported by each stay 381" Working pressure by rules 256 Material of Front plates at bottom steel Thickness 1 1/4" Material of

Lower back plate steel Thickness 1 5/8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 220 Diameter of tubes 3 1/4"

Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 1 1/4" Back 2 1/2" Mean pitch of stays 9" Pitch across wide

water spaces 14 1/2" Working pressures by rules 222 Girders to Chamber tops: Material steel Depth and thickness of

girder at centre 2 plates 8 7/8" x 1 Length as per rule 32 1/2" Distance apart 9" Number and pitch of Stays in each 3 of 8 1/2"

Working pressure by rules 239 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 DAVID & WILLIAM HENDERSON & CO., LIMITED.

Manufacturer.

Is the approved plan of boiler forwarded herewith yes

Total No. of visits 34

Dates of Survey During progress of work in shops — During erection on board vessel —

See accompanying report.

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

Survey Fee £

When applied for, 19

Travelling Expenses (if any) £

When received, 19

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

Committee's Minute

GLASGOW 4 - JUN. 1912

Assigned

See minute on accompanying machinery report

Lloyd's Register Foundation

W485-0068