

REPORT ON BOILERS.

No. 39089

Received at London Office

THU. 11 SEP 1919

Date of writing Report

191

When handed in at Local Office

191

Port of *Glasgow*No. in Survey held at *Glasgow*Date, First Survey *10 / 12 / 1918*Last Survey *29 / 5 / 1919*

1919

Reg. Book.

on the *Boiler No 542 for S.S. "Benvorlich"*(Number of Visits *11*)

Gross

Net

Master

Built at *Glasgow*By whom built *C Connell & Co No 390*When built *1919*Engines made at *Glasgow*By whom made *Dunsmuir & Jackson No 542*When made *1919*Boilers made at *Glasgow*By whom made *Fairfield Shipbuilding Co. Ltd. No 542*When made *1919*

Registered Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel *W. Beardmore & Co. Ltd*(Letter for record *S*)Total Heating Surface of Boilers *7668 sq ft*Is forced draft fitted *Yes*

No. and Description of

Boilers *Three single ended multitubular*Working Pressure *180*Tested by hydraulic pressure to *360*Date of test *27-5-19*No. of Certificate *14726**14735*Can each boiler be worked separately *Yes*Area of fire grate in each boiler *63.3 sq ft*

No. and Description of

safety valves to each boiler *Two spring loaded*Area of each valve *9.62 sq in*Pressure to which they are adjusted *205*Are they fitted with easing gear *Yes*In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *Yes*Smallest distance between boilers or uptakes and bunkers or woodwork *1'-0"*

Mean

dia. of boilers *15'-6"*Length *11'-6"*Material of shell plates *S*Thickness *1 1/4"*Range of tensile strength *28/32*Are the shell plates welded or flanged *No*Descrip. of riveting: cir. seams *L.D.R.*long. seams *T.R. & all strips*Diameter of rivet holes in long. seams *1 5/16"*Pitch of rivets *9 1/8"*Lap of plates or width of butt straps *19 1/2"*

Per centages of strength of longitudinal joint

rivets *88.3*

Working pressure of shell by

rules *182*Size of manhole in *END**16" x 12"*Size of compensating ring *Plate flanged in*

No. and Description of Furnaces in each

boiler *3 Corrugated*Material *S*Outside diameter *50 3/16"*Length of plain part *top*Thickness of plates *crown**1 1/4"*Description of longitudinal joint *weld*No. of strengthening rings *✓*Working pressure of furnace by the rules *187*

Combustion chamber

plates: Material *S*Thickness: Sides *23/32"*Back *1 1/16"*Top *23/32"*Bottom *23/32"*Pitch of stays to ditto: Sides *10 5/8" x 4 1/4"*Back *10 1/4" x 8 3/4"*Top *10 5/8" x 4 1/4"* If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *180*Material of stays *S*

Diameter at

smallest part *2 3/4"*Area supported by each stay *98.4*Working pressure by rules *187*End plates in steam space: Material *S*Thickness *1 1/32"*Pitch of stays *21 1/4" x 20 1/2"* How are stays secured *D. nuts*Working pressure by rules *181*Material of stays *S*Diameter at smallest part *8.29"*Area supported by each stay *1446 sq in*Working pressure by rules *193*Material of Front plates at bottom *S*Thickness *7/8"*

Material of

Lower back plate *S*Thickness *27/32"*Greatest pitch of stays *13 5/8"*Working pressure of plate by rules *187*Diameter of tubes *2 3/4"*Pitch of tubes *4 3/8" x 3 7/8"*Material of tube plates *S*Thickness: Front *3/32"*Back *3/4"*Mean pitch of stays *9 13/16"*

Pitch across wide

water spaces *13 5/8"*Working pressures by rules *182*Girders to Chamber tops: Material *S*

Depth and thickness of

rider at centre *10" x 1 3/4"*Length as per rule *36 9/16"*Distance apart *10 5/8"*Number and pitch of Stays in each *3 @ 9 1/4"*Working pressure by rules *187*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

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 *✓*

For THE FAIRFIELD SHIPBUILDING

AND ENGINEERING CO.,

The foregoing is a correct description,

Alex Cleghorn

Manufacturer.

Dates

During progress of *1919 Dec 10, 1919 Jan 8, 15, Feb 11, 20, Mar 13, 20, Apr 24* Is the approved plan of boiler forwarded herewith *Yes*

Survey

work in shops *- -*

while

During erection on *May 9, 1921*

building

board vessel *- - -*Total No. of visits *11*

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

The boilers have been built under special survey in accordance with the approved plan & the Rules of the Society. The workmanship & materials are good. They have been securely fitted in vessel & satisfactorily tried under steam.

Survey Fee

£

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When applied for, *191*

191

Travelling Expenses (if any) £

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When received, *191*

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Committee's Minute

GLASGOW

10 SEP 1919

Assigned See attached machinery report

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

Lloyd's Register Foundation

W343-0030