

REPORT ON BOILERS.

No. 39089

Received at London Office

THU. 11 SEP 1919

Date of writing Report 101 When handed in at Local Office 101 Port of Glasgow

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

Reg. Book. on the Boilers No 542 for S.S. "Benvorlich" (Number of Visits 11) Tons } Gross
Net

Master Built at Glasgow By whom built C Connell & Co No 390 When built 1919

Engines made at Glasgow By whom made Dunnevis & Jackson No 542 When made 1919

Boilers made at Glasgow By whom made Fairfield SB Ship Co. Ltd. No 542 When made 1919

Registered Horse Power Owners W. Beardmore & Co. Ltd 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 7668.4 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 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 No. and Description of safety valves to each boiler Two spring loaded Area of each valve 9.62 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.P. & S.S. Straps Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 1/8"

Per centages of strength of longitudinal joint 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 19 1/2" Thickness of plates 1 1/32"

Description of longitudinal joint weld No. of strengthening rings 8 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 9 1/4" Back 10 1/4" x 8 3/4"

Top 10 5/8" x 9 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 2.34 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 3/4" 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 446 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 7/8" 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 girder 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 Yes Can the superheater be shut off and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes Flue stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

For THE FAIRFIELD SHIPBUILDING AND ENGINEERING CO., The foregoing is a correct description,
 Alex Cleghorn
 Manufacturer.

Dates of Survey } During progress of work in shops - - } 1919 Dec. 10, 1919 Jan. 8, 15, Feb. 11, 20, Mar. 13, 20, Apr. 24 } Is the approved plan of boiler forwarded herewith Yes

while building } During erection on board vessel - - - } May 9, 19, 27. } 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

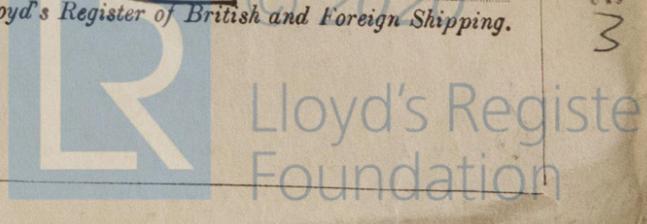
Survey Fee £ 100 : : } When applied for, 191

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

Committee's Minute GLASGOW 10 SEP 1919

Assigned See attached machinery report

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



W343-0030