

REPORT ON BOILERS.

No. 3135-1

Received at London Office

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Date of writing Report 19 When handed in at Local Office 23-4-1912 Port of Glasgow.

No. in Survey held at Glasgow Date, First Survey 2-8-10 Last Survey 20-4-1912

Reg. Book. 90 on the Auxiliary boiler for S.S. "TAQUARY" (Number of Visits) Gross 1942 Net 1598

Master T. J. Gargelista Built at Glasgow By whom built Mackie & Thompson (N^o 426) when built 1912

Engines made at Glasgow By whom made Muir & Houston (N^o 641) when made 1912

Boilers made at Glasgow By whom made Muir & Houston (N^o 641) when made 1912

Registered Horse Power 243.4. Owners Cia Comercio e Navegacao Port belonging to Rio de Janeiro

MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. - Manufacturers of Steel Glasgow Iron & Steel Co., Steel Co. of Scotland, Stewart & Lloyd.

(Letter for record (S)) Total Heating Surface of Boilers 1020 \square Is forced draft fitted No No. and Description of Boilers One single ended marine Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 13-12-1911

No. of Certificate 11326 Can each boiler be worked separately Yes Area of fire grate in each boiler 32 $\frac{1}{2}$ \square No. and Description of safety valves to each boiler 2 - Spring loaded Area of each valve 3.14 \square Pressure to which they are adjusted 185 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 8'-0" Mean dia. of boilers 11'-6" Length 10'-0"

Material of shell plates Steel Thickness $\frac{3}{32}$ Range of tensile strength 28/32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams D.R. long. seams T.R.D.B.S Diameter of rivet holes in long. seams $\frac{1}{8}$ " Pitch of rivets $\frac{1}{2}$ "

Lap of plates or width of butt straps 1'-5" Per centages of strength of longitudinal joint rivets 102 plate 85 Working pressure of shell by rules 183 lbs. Size of manhole in shell 16" x 12" Size of compensating ring 31 x 24 x 1" No. and Description of Furnaces in each boiler 2 - Marine Material Steel Outside diameter 3'-6" Length of plain part top bottom Thickness of plates crown $\frac{1}{2}$ " bottom $\frac{1}{2}$ "

Description of longitudinal joint weld No. of strengthening rings Nil Working pressure of furnace by the rules 180 lbs. Combustion chamber plates: Material Steel Thickness: Sides $\frac{4}{16}$ " Back $\frac{4}{16}$ " Top $\frac{4}{16}$ " Bottom $\frac{3}{4}$ " Pitch of stays to ditto: Sides 8 x 8 $\frac{1}{2}$ " Back 8 x 9 $\frac{1}{2}$ "

Top 8 x 8 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 183 lbs. Material of stays Steel Diameter at smallest part 1.43 \square Area supported by each stay 46 \square Working pressure by rules 182 lbs. End plates in steam space: Material Steel Thickness $\frac{3}{32}$ "

Pitch of stays 14 x 14 How are stays secured D.N. Working pressure by rules 185 lbs. Material of stays Steel Diameter at smallest part 5.05 \square

Area supported by each stay 289 \square Working pressure by rules 185 lbs. Material of Front plates at bottom Steel Thickness $\frac{3}{4}$ " Material of Lower back plate Steel Thickness $\frac{13}{16}$ " Greatest pitch of stays 8 x 13 $\frac{3}{4}$ " Working pressure of plate by rules 180 lbs. Diameter of tubes 3 $\frac{1}{2}$ " $\frac{3}{4}$ "

Pitch of tubes 4 $\frac{1}{8}$ " x 4 $\frac{1}{2}$ " Material of tube plates Steel Thickness: Front $\frac{3}{4}$ " Back $\frac{3}{4}$ " Mean pitch of stays 9 $\frac{1}{8}$ " Pitch across wide water spaces 14 $\frac{1}{4}$ " x $\frac{1}{8}$ " O.P. Working pressures by rules 199 lbs. Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 4" x 1" (double) Length as per rule 2'-6" Distance apart 8 $\frac{1}{2}$ " Number and pitch of Stays in each 3 at 8"

Working pressure by rules 186 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,
 MUIR & HOUSTON, LIMITED. *Secretary* Manufacturer.

Dates of Survey } During progress of work in shops - - } See Machinery Report Is the approved plan of boiler forwarded herewith Yes & advice note.
 while building } During erection on board vessel - - }

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The materials and workmanship are good. This boiler has been built under special survey and satisfactorily fitted aboard

Survey Fee £ charged on Machinery Report. When applied for, 1912

Travelling Expenses (if any) £ : : When received, 1912

Committee's Minute GLASGOW 23 APR. 1912

Assigned See accompanying machinery report.

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

