Rpt. 5a.

REPORT ON BOILERS.

No. 29453.

Received at London Office WED. 2 NOV 1910

Date of writing Report 24. 10 - 1910 When handed in at Local Office 29/10/ 1910 Port of Glasgow.

No. in Reg. Book. Survey held at Glasgow Date, First Survey 17th Febry/10 Last Survey 1st Nov 1910 (Number of Visits)

on the Twin Screw S/S "Abhona" Tons Gross 4066.48 Net 1683.90

Master T. S. Tilling Built at Glasgow. By whom built A. Stephen & Sons Ltd When built 1910

Engines made at Glasgow By whom made Alex Stephen & Sons Ltd (439) when made 1910

Boilers made at ditto By whom made ditto (439) when made 1910

Registered Horse Power 1317. Owners British India S.N. Co Ltd Port belonging to Glasgow

MULTITUBULAR BOILERS—MAIN. ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel Steel Co. of Scotland

(Letter for record S) Total Heating Surface of Boilers 10,428 Is forced draft fitted Yes No. and Description of Boilers 4 Single Ended Working Pressure 215. Tested by hydraulic pressure to 430 Date of test 29-6-10. 8-7-10

No. of Certificate 10,418 10,499. 10,500 Can each boiler be worked separately Yes Area of fire grate in each boiler 64.82 No. and Description of safety valves to each boiler 2 Dred Spring Area of each valve 8.29 Pressure to which they are adjusted 220

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 11" Mean dia. of boilers 15'-6" Length 11'-9"

Material of shell plates S Thickness 23/32" Range of tensile strength 28/32 Are the shell plates welded or flanged

Descrip. of riveting: cir. seams TR long. seams TR + DBS Diameter of rivet holes in long. seams 23/32" Pitch of rivets 10 5/8"

~~Lap of plates or~~ width of butt straps 24 1/4" Per centages of strength of longitudinal joint rivets 94.5% plate 83.82 Working pressure of shell by rules 248 Size of manhole in shell 16" x 12" Size of compensating ring McAlis No. and Description of Furnaces in each boiler 4 Corrugated Material S Outside diameter 3-6 5/8" Length of plain part top / bottom / Thickness of plates crown 39/64" bottom

Description of longitudinal joint weld No. of strengthening rings Working pressure of furnace by the rules 230 Combustion chamber plates: Material S Thickness: Sides 11/16" Back 11/16" Top W 11/16" C 3/4" Bottom 61/64" Pitch of stays to ditto: Sides 8" x 9" Back 6 1/4" x 10 1/2" Top 9" x 8" ~~or~~ 10 1/2" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 225 Material of stays S ~~Diameter~~ area at smallest part 49.2 12.7 Area supported by each stay 42 Working pressure by rules 223 End plates in steam space: Material S Thickness 17/32"

Pitch of stays 9 x 13 3/4" How are stays secured D N Working pressure by rules 220 Material of stays S ~~Diameter~~ area at smallest part 7.22

Area supported by each stay 229.25 Working pressure by rules 250 Material of Front plates at bottom S Thickness 7/8" Material of Lower back plate S Thickness 61/64" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 224 Diameter of tubes 2 1/2"

Pitch of tubes 3 3/4 x 3 5/8" Material of tube plates S Thickness: Front 7/8" DP Back 7/8" Mean pitch of stays 7 3/8" Pitch across wide water spaces 13 1/2" Working pressures by rules 224 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10 1/8 x 1" (2) Length as per rule 2'-8 1/4" Distance apart 9" & 10 1/2" Number and pitch of Stays in each 3 at 8"

Working pressure by rules 249 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 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,
Alex. Stephen & Sons Ltd.
Thos. M. Elmore Secy. Manufacturer.

Dates of Survey while building: During progress of work in shops - - See Accompanying Mach. Rpt. During erection on board vessel - - -

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been built under Special Survey in accordance with the Approved plan & the workmanship & material are of good quality. The Report accompanies that of the Machinery

Survey Fee ... . £ See Machinery Rpt. When applied for. 19

Travelling Expenses (if any)) £ When received. 19

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

Committee's Minute GLASGOW 1 NOV. 1910

Assigned See report on machinery.

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