

REPORT ON BOILERS.

No. 8560.
SAT. JUL. 25. 1914.

Received at London Office

Date of writing Report 22.7.1914. When handed in at Local Office 24.7.1914. Port of Middlesbrough on Tees.
 No. in Survey held at Middlesbrough Date, First Survey — Last Survey — 191 —
 Reg. Book. 54 on the S.S. "Galernian" (Number of Visits —) Tons } Gross }
 Master Built at Middlesbrough By whom built W. Harkness & Son Ltd. When built 1914
 Engines made at Middlesbrough By whom made Richardsons, Westgarth & Co. Ltd. When made 1914
 Boilers made at do By whom made do When made 1914
 Registered Horse Power Owners Ellerman Lines Ltd. Port belonging to Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel John Spencer & Sons Ltd.

(Letter for record (S) Total Heating Surface ^{3 main} 4896 sq ft (3022+1874) Is forced draft fitted Yes No. and Description of Boilers One S.E. Cyl. mult. Working Pressure 215 lbs Tested by hydraulic pressure to 430 lbs Date of test 26.1.14
 No. of Certificate 5225 Can each boiler be worked separately Yes Area of fire grate in each boiler 38 1/2 sq ft. No. and Description of safety valves to each boiler Two direct spring Area of each valve 4.9 sq in Pressure to which they are adjusted 220 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 Centre boiler Mean dia. of boiler 12'-6" Length 12'-0"
 Material of shell plates Steel Thickness 1 3/16 Range of tensile strength 29-33 Are the shell plates welded or flanged No
 Descrip. of riveting: cir. seams A.A. Lap long. seams B.S. 5 Rivets Diameter of rivet holes in long. seams 1 1/4 Pitch of rivets 8 5/8
 Lap of plates or width of butt straps 19 1/4 Per centages of strength of longitudinal joint rivets 88.6 plate 85.5 Working pressure of shell by rules 221 lbs Size of manhole in shell 16 x 12 Size of compensating ring 34 1/2 x 29 x 1 3/16 No. and Description of Furnaces in each boiler Two Morison Material Steel Outside diameter 3'-8 1/2 Length of plain part top 5" bottom 8" Thickness of plates
 Description of longitudinal joint Welded No. of strengthening rings ✓ Working pressure of furnace by the rules 226 Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 1 Pitch of stays to ditto: Sides 10 1/8 x 10 Back 9 x 8 3/4
 Top 10 1/8 x 7 5/8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 222 Material of stays Steel Area Diameter at smallest part 2.1 Area supported by each stay 78.7 Working pressure by rules 239 End plates in steam space: Material Steel Thickness 1 3/32 Area supported by each stay 319 Working pressure by rules 229 Material of Front plates at bottom Steel Thickness 1 3/32 Material of Lower back plate Steel Thickness 31/32 Greatest pitch of stays 14 1/2 x 8 3/4 Working pressure of plate by rules 226 Diameter of tubes 2 1/2
 Pitch of tubes 3 3/4 x 3 3/4 Material of tube plates Steel Thickness: Front 1 3/32 Back 3/4 Mean pitch of stays 9 3/8 Pitch across wide water spaces 13 1/2 Working pressures by rules 223 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9 3/4 x 1 7/8 Length as per rule 2-8 17/32 Distance apart 10 1/8 Number and pitch of Stays in each 3 @ 7 5/8
 Working pressure by rules 233 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 ✓
 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 and on behalf of RICHARDSONS, WESTGARTH & Co., Ltd. The foregoing is a correct description,
 E. Hall-Brown, Manufacturer.

Dates of Survey } During progress of } See Machinery Report Is the approved plan of boiler forwarded herewith Yes ✓
 while building } work in shops - - }
 } During erection on }
 } board vessel - - - }
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under Special Survey, is of good material and workmanship, and has been fitted and secured on board in accordance with the Rules.

Survey Fee ... £ See Machinery Report When applied for 191
 Travelling Expenses (if any) £ Report When received 191
 E. Messinger
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUE. AUG. 11, 1914 TUE. SEP. 1, 1914
 Assigned



2200-822M