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Rpt. 5a.

REPORT ON BOILERS.

No. 7969
SAT. JUN. 14 1913

of writing Report 12.6.13 191 When handed in at Local Office 13.6.1913 Port of Middlesbrough
 No. in Survey held at Stockton-on-Tees Date, First Survey 8th April Last Survey 7th June 1913
 Reg. Book. on the Steel Screw Steamer "Atherstone" (Number of Visits (S.S.N. 157)) Tons }
 Master Built at Thornaby By whom built Craig Taylor & Co When built 1913
 Engines made at Stockton By whom made Jesson Blair & Co When made 1913
 Boilers made at Stockton By whom made Jesson Riley Bros Ltd. (N. 4457) When made 1913
 Registered Horse Power Owners Port belonging to

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

(Letter for record (S)) Total Heating Surface of Boilers 863 sq ft Is forced draft fitted no No. and Description of Boilers One single ended Working Pressure 120 Tested by hydraulic pressure to 240 Date of test 7.6.13

No. of Certificate 5088 Can each boiler be worked separately yes Area of fire grate in each boiler 29 sq ft No. and Description of safety valves to each boiler 2 direct spring Area of each valve 4.91 Pressure to which they are adjusted 125
 Are they fitted with easing gear yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" Inside Mean dia. of boilers 10'-0" Length 10'-0"
 Material of shell plates steel Thickness 5/8" Range of tensile strength 28-32 Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams 2 R. lap long. seams 2 B-2 Riv Diameter of rivet holes in long. seams 15/16 Pitch of rivets 5-1/2"
 Lap of plates or width of butt straps 9 1/2" x 5/8" 3 Rivets per pitch Per centages of strength of longitudinal joint rivets 90.0 plate 92.9 Working pressure of shell by rules 122 Size of manhole in shell 19" x 15" Size of compensating ring 7" x 1" No. and Description of Furnaces in each boiler 2 plain Material steel Outside diameter 36" Length of plain part top 77" Thickness of plates crown 5/8" bottom 7/8"

Description of longitudinal joint Weld No. of strengthening rings none Working pressure of furnace by the rules 151 Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 5/8" Top 9/16" Bottom 13/16" Pitch of stays to ditto: Sides 9 1/4" x 8" Back 10" x 9"
 Top 9 1/4" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 146 Material of stays steel Diameter at smallest part 1.45" Area supported by each stay 90 Working pressure by rules 129 End plates in steam space: Material steel Thickness 7/8"

Pitch of stays 16" x 17" How are stays secured nuts & washers Working pressure by rules 120 Material of stays steel Diameter at smallest part 4.11"
 Area supported by each stay 255 Working pressure by rules 168 Material of Front plates at bottom steel Thickness 7/8" Material of lower back plate steel Thickness 7/8" Greatest pitch of stays 13" x 9" Working pressure of plate by rules 212 Diameter of tubes 3 1/2"

Pitch of tubes 4 5/8" x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 5/8" Mean pitch of stays 10 9/16" Pitch across wide inter spaces 14 1/2" Working pressures by rules 121 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 6 1/2" x 1 1/4" Length as per rule 27" Distance apart 9" Number and pitch of Stays in each 2 @ 8"

Working pressure by rules 121 Superheater or Steam chest: none 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 rivets

es 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

SURVEY REQUEST NO. 663 ATTACHED, FOR RILEY BROS. BOILERMAKERS LIMITED, The foregoing is a correct description, Wm Morrison Manufacturer.
 Dates During progress of work in shops - - - Apr. 8. 17. 19. May 2. 8. 20. 24. 28. 30. Jun 4. 7 Is the approved plan of boiler forwarded herewith yes
 Survey while building During erection on board vessel - - - Total No. of visits 11 Return for duplicate Boiler

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been built under special survey, is of good material and workmanship and on completion was tested by hydraulic pressure with satisfactory results. The boiler is to be fitted on board at this port. This boiler has now been satisfactorily secured on board, examined under steam and safety valves adjusted
 Wm Morrison
 17.7.13

Survey Fee ... £ 2-18-0 When applied for, MONTHLY A/c, 191
 Travelling Expenses (if any) £ ... When received, 191

Committee's Minute FRI. AUG. 8-1913
 Wm Morrison
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

