

REPORT ON BOILERS.

SAT. 19 JUN 1909

No. 5669

TUES. 19 JAN 1909

Received at London Office

MIDDLESBROUGH-ON-TEES.

Date of writing Report 18 June 1909 When handed in at Local Office 18.1.10.09 Port of MIDDLESBROUGH-ON-TEES.
 No. in Survey held at Stockton Date, First Survey 28th Sept. 1908 Last Survey 16 June 1909
 Reg. Book. ✓ on the Main Boiler No. 3980 for Messrs Philip Han Ltd, S. Aug. No. 348 Tons } Gross 150.08
 } Net Nil
 Master W. Arming Built at Dartmouth By whom built Messrs Philip & Son Ltd When built 1909-6
 Engines made at Dartmouth By whom made Philip & Son Ltd when made 1909
 Boilers made at Stockton By whom made Riley Bros Ltd when made 1909
 Registered Horse Power ✓ Owners W. Watkins Port belonging to London

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

(Letter for record 5) Total Heating Surface of Boilers 1500 sq. ft. Is forced draft fitted No No. and Description of Boilers One S. E. Cyl. Mult. Working Pressure 165 lbs Tested by hydraulic pressure to 330 lbs Date of test 8.1.09

No. of Certificate 4221 Can each boiler be worked separately ✓ Area of fire grate in each boiler 35.5 sq. ft. No. and Description of safety valves to each boiler Two in one box - Vent 2 1/2" Area of each valve 4.9 sq. ins Pressure to which they are adjusted 165 lbs per sq. in

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 7 inches Mean dia. of boilers 12'-0" Length 10'-0"

Material of shell plates Steel Thickness 15/16" Range of tensile strength 28-32 Are the shell plates welded or flanged No
 Descrip. of riveting: cir. seams DR Lap long. seams DR 5 Rivets Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/4"

Lap of plates or width of butt straps 16" Per centages of strength of longitudinal joint rivets 91.3 Working pressure of shell by rules 171 lbs Size of manhole in shell 16" x 12" Size of compensating ring 7" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-6" Length of plain part at bottom top 6'-4 3/4" Thickness of plates crown 3/4" bottom 1/4"

Description of longitudinal joint Welded No. of strengthening rings T bar Working pressure of furnace by the rules 186 lbs Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 19/32" Top 5/8" Bottom 3/4" Pitch of stays to ditto: Sides 9 1/2" x 8" Back 8 1/2" x 8 1/2"

Top 8" x 8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 169 lbs Material of stays Steel Diameter at smallest part 1 1/2" Area supported by each stay 76" Working pressure by rules 176 End plates in steam space: Material Steel Thickness 15/16" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 16" x 11" Working pressure of plate by rules 188 Diameter of tubes 3 1/4"

Pitch of tubes 4 3/8" x 4 1/4" Material of tube plates Steel Thickness: Front 15/16" Back 25/32" Mean pitch of stays 9 3/4" Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7" x 1 1/2" Length as per rule 2'-4" Distance apart 8" Number and pitch of Stays in each 2 @ 8"

Working pressure by rules 175 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,
 RILEY BROS. (BOILERMAKERS) LIMITED, Manufacturer.

Dates of Survey } During progress of work in shops - } 1908 Sept. 28. Oct. 8. 12. 14. 19. 23. 27. 30. Nov. 2. 6. 10. 16. 20. 25. 27. Dec. 1. 4. 7. 9. 14. 17. 21. 23. 27. 1909 Jan. 6-8
 while building } During erection on board vessel - } 1909. May 13. 21. 27 June 4. 10. 16
 Is the approved plan of boiler forwarded to the Secretary ✓ Oct. 5651
 Total No. of visits 32

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 tested by hydraulic pressure with satisfactory results.

Survey Fee ... £ 3 : 19 : } When applied for, 19.09 } vide Sect's Letter of that date Jan. 18.09
 Travelling Expenses (if any) £ : : } When received, 15 Feb. 7 19.09
W. Morrison
 Engineer Surveyor to Lloyd's Register of British and Foreign Shipping.

Committee's Minute TUES. 22 JUN 1909
 Assigned



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