

# REPORT ON BOILERS.

No. 8545.

THU. JUL. 16. 1914

Received at London Office

TUE. SEP. 15. 1914

Date of writing Report July 14 1914 When handed in at Local Office 15. 7. 1914 Port of MIDDLESBROUGH

No. in Survey held at Middlesbrough Date, First Survey 28<sup>th</sup> Nov. 1913. Last Survey 27<sup>th</sup> February 1914  
 (Number of Visits 15.) } Gross  
 Reg. Book. on the Main Boiler No. 2222 of S.T. "Eribus" } Net

Master Built at Middlesbrough By whom built Smiths Dock Co. Ltd. When built 1914

Engines made at Middlesbrough By whom made Smiths Dock Co. Ltd. (No. 544) When made 1914-9.

Boilers made at Middlesbrough By whom made Richardsons, Westgarth & Co. Ltd. When made 1914

Registered Horse Power Owners The Canadian Ste. Fishing & Ice Co. Ltd. Port belonging to Grimsby

## MULTITUBULAR BOILERS - MAIN, AUXILIARY OR DONKEY. Manufacturers of Steel John Spencer Sons Ltd.

Letter for record (S) Total Heating Surface of Boilers 1210 sq. ft. Is forced draft fitted no. No. and Description of boilers One S.T. Cyl. hull. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27. 2. 14.

No. of Certificate 5244 Can each boiler be worked separately ✓ Area of fire grate in each boiler 38 1/2 sq. ft. No. and Description of safety valves to each boiler two spring loaded Area of each valve 3.976 sq. in. 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 eleven inches Mean dia. of boilers 12'-0" Length 10'-0"

Material of shell plates Steel Thickness 1" Range of tensile strength 28-32 Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams B.P. Lap long. seams ABT 5 Rivets Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/8"

Top of plates or width of butt straps 1'-4 3/4" Per centages of strength of longitudinal joint rivets 89.7% Working pressure of shell by rules 183 lbs plate 85.6%

No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 3'-7 5/8" Length of plain part 6'-0" Thickness of plates 13/16" crown 13/16" bottom 9/16"

Description of longitudinal joint Welded No. of strengthening rings ✓ Working pressure of furnace by the rules 195 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1 1/32" Pitch of stays to ditto: Sides 10"x8 1/2" Back 9 3/4"x8 1/2"

Top 9 1/2"x9" stays are fitted with nuts or riveted heads Nuts Working pressure by rules 190 lbs Material of stays Steel Diameter at smallest part 2.1" Area supported by each stay 85 sq. in. Working pressure by rules 222 End plates in steam space: Material Steel Thickness 1"

Pitch of stays 16"x15 1/2" How are stays secured by nuts Working pressure by rules 191 Material of stays Steel Diameter at smallest part 5.03"

Area supported by each stay 252 sq. in. Working pressure by rules 208 Material of Front plates at bottom Steel Thickness 1 1/32" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 15 1/4"x9 3/4" Working pressure of plate by rules 212 Diameter of tubes 3 1/4"

Pitch of tubes 4 5/8"x4 1/2" Material of tube plates Steel Thickness: Front 1 1/32" Back 13/16" Mean pitch of stays 10 1/4" Pitch across wide water spaces 14" Working pressures by rules 195 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/2"x1 3/4" Length as per rule 2'-6" Distance apart 9" Number and pitch of Stays in each 2 @ 9 1/2"

Working pressure by rules 190 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 ✓

SURVEY REQUEST NO. 872 ATTACHED.

For and on behalf of RICHARDSONS, WESTGARTH & Co. Ltd. The foregoing is a correct description, J. Hall-Brown, Manufacturer.

Dates of Survey } During progress of work in shops - - } 1913. Nov. 28 Dec. 1. 10. 12. 19. 22 9/14. Jan. 8. 12. 21. 26 Is the approved plan of boiler forwarded herewith yes  
 while building } During erection on board vessel - - - } Feb. 2. 12. 17. 25. 27 Total No. of visits 15

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 ... .. £ 4 : 1 : } When applied for, 191  
 Travelling Expenses (if any) £ : : } When received, 191

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

Committee's Minute FRI. SEP. 18. 1914  
Assigned

