

REPORT ON BOILERS

No. 79060

Received at London Office

SAT. 24 MAY 1919

Date of writing Report 1919 When handed in at Local Office 21 MAY 1919 Port of LIVERPOOL

No. in Survey held at Birkenhead Date, First Survey Aug 14th 1918 Last Survey May 9th 1919
 Reg. Book. on the Boilers for s/s "War Yare" (Number of Visits 83) (Gross 2436 Tons) (Net 1508)
 Master Built at Lorton By whom built H. & C. Grayson Ltd. When built 1919
 Engines made at Liverpool By whom made David Rollo & Sons When made 1919
 Boilers made at Birkenhead By whom made Cammell, Laird & Co. Ltd. When made 1919
 Registered Horse Power Owners Shipping Lortholler Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel J. Bellville & Sons Ltd., J. Grayson & Sons Ltd., J. P. & S. Co. Ltd.

(Letter for record S) Total Heating Surface of Boilers 4500 sq. ft. Is forced draft fitted No. and Description of Boilers 2 - Cylindrical Multitubular Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14/19, 7/4/19

No. of Certificates 2062, 2063 Can each boiler be worked separately Yes Area of fire grate in each boiler 66 sq. ft. No. and Description of safety valves to each boiler 2 - Spring loaded Area of each valve 7.07 sq. in. Pressure to which they are adjusted 180 lbs.

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler None

Smallest distance between boilers or uptakes and bunkers or woodwork 4'6" Inside Mean dia. of boilers 14'9" Length 11'3"

Material of shell plates Steel Thickness 1 3/16" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams DR - Lap long. seams TR - trouble straps Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/4"

Gap of plates or width of butt straps 18 3/4" Per centages of strength of longitudinal joint rivets 87.8 plate 85.71 Working pressure of shell by rules 181 lbs

Size of manhole in shell 16" x 12" Size of compensating ring Dished No. and Description of Furnaces in each boiler 3 - Corrugated Material Steel Outside diameter 3'11" Length of plain part top 9" Thickness of plates crown 9" bottom 9"

Description of longitudinal joint Weld No. of strengthening rings Working pressure of furnace by the rules 187 lbs Combustion chamber plates: Material Steel Thickness: Sides 23 3/32" Back 1 1/8" Top 23 3/32" Bottom 23 3/32" Pitch of stays to ditto: Sides 10 1/2" x 9 3/4" Back 9 3/4" x 9 3/4"

Top 10 1/2" x 9 3/4" stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181 lbs Material of stays Steel Area at smallest part 2.03 sq. in. Area supported by each stay 97.125 sq. in. Working pressure by rules 188 lbs

End plates in steam space: Material Steel Thickness 1 3/32" Pitch of stays 21 1/2" x 20" How are stays secured Nuts Working pressure by rules 180 lbs Material of stays Steel Area at smallest part 7.85 sq. in.

Area supported by each stay 430 sq. in. Working pressure by rules 190 lbs Material of Front plates at bottom Steel Thickness 1 1/32" Material of Lower back plate Steel Thickness 3 1/32" Greatest pitch of stays 14 1/4" x 9 3/4" Working pressure of plate by rules 220 lbs

Diameter of tubes 3 1/2" inch Pitch of tubes 4 3/4" x 4 1/2" Material of tube plates Steel Thickness: Front 1 1/32" Back 1 3/16" Mean pitch of stays 13 1/2" x 9" Pitch across wide water spaces 14 1/4"

Working pressures by rules 188 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 2-7 3/4" x 3 1/4" Length as per rule 29 1/2" Distance apart 9 1/4" Number and pitch of Stays in each 2 - 10 1/2"

Working pressure by rules 185 lbs Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

UPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

Safety Valve adjusting washers Standard Boiler - S = 3/16" P = 3/16" Port " " = 1/4" " = 3/16"

The foregoing is a correct description, CAMMELL LAIRD AND COMPANY LIMITED Manufacturer.

Dates of Survey During progress of work in shops 1918 Aug 14, Nov 18, 20, 21, 22, 26, 29, Dec 3, 4, 6, 10, 13, 17. Is the approved plan of boiler forwarded herewith Yes

while building During erection on board vessel 1919 Jan 6, 10, 14, 15, 20, 24, 27, 31, Feb. 4, 12, 18, 20, 26, March 7, 14, 25, May 8, 9. Total No. of visits 42.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under Special Survey in accordance with the approved plan and the Secretary's letters (E) of 1st and 17th August 1918. The materials and workmanship are of good quality. When tested by water to twice the working pressure they were found tight and satisfactory in every respect.

Survey Fee (£ 13 : 10 : 8) Travelling Expenses (if any) £ : : When applied for, 23 MAY 1919 When received, 28/6/19 1919

Committee's Minute LIVERPOOL 23 MAY 1919 B. P. Bedford & J. M. 20 Gyles Engineer Surveyor to Lloyd's Register of Shipping.

Assigned See machinery report attached

