

REPORT ON BOILERS.

No. 27484

Received at London Office

17 APR 1919

Date of writing Report 1919 When handed in at Local Office 16 APR 1919 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 23 Sept '18 Last Survey 31 Jan'y 1919

Req. Book. on the 4s "WAR BERYL" (Number of Visits 15) Gross Tons 6723 Net Tons 4094

Master McKillop Built at Sunderland By whom built W. Doxford & Sons (533) When built 1919

Engines made at Sunderland By whom made W. Doxford & Sons (527) When made 1919

Boilers made at Sunderland By whom made W. Doxford & Sons (533) When made 1919

Registered Horse Power 596 (Sec. 28) Owners Canadian Pacific Ry. Co. Port belonging to London

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~.—Manufacturers of Steel Spunners & Sons

Letter for record S) Total Heating Surface of Boilers 9525 sq ft Is forced draft fitted 410 No. and Description of Boilers Three single ended Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 16, 22, 31-1-19

No. of Certificate 3514, 3526, 3531 Can each boiler be worked separately 410 Area of fire grate in each boiler 72 sq ft No. and Description of safety valves to each boiler Two spring valves Area of each valve 12.5 sq in Pressure to which they are adjusted ✓

Are they fitted with easing gear 410 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 — Mean dia. of boilers 16'-1 1/2" Length 12'-5"

Material of shell plates S Thickness 1 5/16 Range of tensile strength 28 1/2 to 433 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams Lap Riv. long. seams d. Riv. Riv. Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/2

Top of plates or width of butt straps 20 1/8 Per centages of strength of longitudinal joint rivets 88.6 plate 85.5 Working pressure of shell by rules 191 Size of manhole in shell ends 16 x 12 Size of compensating ring None No. and Description of Furnaces in each boiler 4 Dighton Material S Outside diameter 3'-7" Length of plain part top — bottom — Thickness of plates crown 17 bottom 32

Description of longitudinal joint Weld No. of strengthening rings — Working pressure of furnace by the rules 190 Combustion chamber plates: Material S Thickness: Sides 23/32 Back 3/4 Top 23/32 Bottom 7/8 Pitch of stays to ditto: Sides 10 1/2 x 8 3/4 Back 9 3/8 x 9 13/16

Top 8 3/4 x 10 1/4 If stays are fitted with nuts or riveted heads nuts ✓ Working pressure by rules 198 Material of stays S Area at smallest part 2.03 sq ft Area supported by each stay 88.75 sq ft Working pressure by rules 205 End plates in steam space: Material S Thickness 1 7/8

Pitch of stays 23 1/2 x 22 1/2 How are stays secured d. riv. Working pressure by rules 185 Material of stays S Area at smallest part 9.66 sq ft

Area supported by each stay 528 sq ft Working pressure by rules 189 Material of Front plates at bottom S Thickness 3/32 Material of lower back plate S Thickness 7/8 Greatest pitch of stays 13 5/8 Working pressure of plate by rules 187 Diameter of tubes 2 1/2

Pitch of tubes 3 3/4 x 3 5/8 Material of tube plates S Thickness: Front 3/32 Back 3/4 Mean pitch of stays 11 1/4 x 7 1/4 Pitch across wide water spaces 13 5/8 Working pressures by rules 180 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10 1/2 x 1 3/4 Length as per rule 36 1/2 Distance apart 10 1/8 Number and pitch of Stays in each 3, 8 3/4

Working pressure by rules 200 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 ✓

SUPERHEATER. 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 ✓

WILLIAM DOXFORD & SONS, Limited,
The foregoing is a correct description,
A. Maxwell, Manufacturer.

Dates During progress of 1918 Sep 23 Oct 1, 10, 16, 25, 30 Nov 11, 22, 25 Dec 13 Is the approved plan of boiler forwarded herewith 410

Survey while building (work in shops - - -) Jan 9, 16, 22, 29, 31. Total No. of visits 15

(During erection on board vessel - - -)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers of this vessel have been built under special survey, the materials and workmanship are sound and good. The engines have been built and all machinery installed under B.C. survey. The engines made by Messrs Doxford are triple expansion. Cylinders 27, 44, 73" stroke 48" A. Type Boilers F Type. No donkey boiler.

Survey Fee £ 37: 7: When applied for, 5.4 1919

Travelling Expenses (if any) £ : : When received, 12.4 1919

Committee's Minute TUE. APR. 29. 1919

Assigned See S. Dept. on hull

Engineer Surveyor to Lloyd's Register of Shipping.

