Rpt. 5a.

REPORT ON BOILERS.

No. 50566

Received at London Office 17 SEP 1930

Date of writing Report ____ 19__ When handed in at Local Office 12 · 6 · 1930 Port of Glasgow 18 JUN 1930

No. in Reg. Book. Survey held at Glasgow Date, First Survey 17 · 1 · 30 Last Survey 10-6- 1930

on the "CITE DE QUEBEC" (Number of Visits 21) Tons { Gross 1259 / Net 467

Master ____ Built at Old Kilpatrick By whom built Napier & Miller Ltd Yard No. 275 When built 1930

Engines made at Glasgow By whom made McKie & Baxter Ltd Engine No. 1260 When made 1930

Boilers made at Glasgow By whom made D & W. Henderson & Co. Ltd Boiler No. 17F When made 1930

Nominal Horse Power 277 Owners Lewis Ferry Co. Port belonging to Glasgow.

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY, OR DONKEY~~.

Manufacturers of Steel David Colville & Sons Ltd (Letter for Record G)

Total Heating Surface of Boilers 4438 □' Is forced draught fitted yes Coal or Oil fired coal

No. and Description of Boilers Two single ended S / SCB P **Working Pressure** 185

Tested by hydraulic pressure to 328 Date of test 6-6-30. 10-6-30 No. of Certificate S 18746 P 18749 Can each boiler be worked separately –

Area of Firegrate in each Boiler 57·750 □' No. and Description of safety valves to each boiler Two direct spring.

Area of each set of valves per boiler { per Rule 6·9 □' / as fitted 7·07 □' Pressure to which they are adjusted Are they fitted with easing gear –

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 – Is oil fuel carried in the double bottom under boilers –

Smallest distance between shell of boiler and tank top plating – Is the bottom of the boiler insulated –

Largest internal dia. of boilers 14'-6" Length 11'-0" **Shell plates:** Material steel Tensile strength 28·32 tons

Thickness 1 15/64" Are the shell plates welded or flanged no Description of riveting: circ. seams { end WR / inter. – long. seams WBS . TR Diameter of rivet holes in { circ. seams 1¼" / long. seams 1¼" Pitch of rivets { 3·84" / 9"

Percentage of strength of circ. end seams { plate 67.6 / rivets 42·4 Percentage of strength of circ. intermediate seam { plate / rivets

Percentage of strength of longitudinal joint { plate 86·2 / rivets 85 / combined 89·2 Working pressure of shell by Rules 186

Thickness of butt straps { outer 15/16" / inner 1 1/16" **No. and Description of Furnaces in each Boiler** Three Morison

Material steel Tensile strength 26-30 tons Smallest outside diameter 43.125"

Length of plain part { top / bottom Thickness of plates { crown / bottom } 9/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom – Working pressure of furnace by Rules 189

End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 1 13/64" Pitch of stays 18"×18⅛"

How are stays secured DN Working pressure by Rules 185

Tube plates: Material { front steel / back " Tensile strength { 26-30 tons / " Thickness { 63/64" / 3/4"

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 13¾" Working pressure { front 191 / back 200

Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder at centre 2 @ 7¼" × ¾" Length as per Rule 29·595 Distance apart 8¼" No. and pitch of stays in each 2 @ 9¼" Working pressure by Rules 185 **Combustion chamber plates:** Material steel

Tensile strength 26-30 Thickness: Sides 41/64" Back 21/32" Top 41/64" Bottom 13/16"

Pitch of stays to ditto: Sides 8¼"×9¼" Back 9"×9" Top 8¼×9¼" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 185 **Front plate at bottom:** Material steel Tensile strength 26-30 tons

Thickness 63/64" **Lower back plate:** Material steel Tensile strength 26-30 tons Thickness 53/64"

Pitch of stays at wide water space 14½"×9" Are stays fitted with nuts or riveted over nuts

Working Pressure 187 **Main stays:** Material steel Tensile strength 28-32 tons

Diameter { At body of stay, / & Over threads 3" No. of threads per inch 6 Area supported by each stay 310

Working pressure by Rules 216 **Screw stays:** Material steel Tensile strength 26-30 tons

Diameter { At turned off part, / or Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 810"

Working pressure by Rules 188 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads } 2" /

No. of threads per inch 9 / Area supported by each stay 105.50" / Working pressure by Rules 234

Tubes: Material Steel / External diameter { Plain 2¾" / Stay 2¾" } Thickness { 9L.S.G. / 3/8", 7/16" / } No. of threads per inch 9

Pitch of tubes 4"×4" / Working pressure by Rules 215" **Manhole compensation:** Size of opening in shell plate 20¼"×16¼" / Section of compensating ring 9¾×1 15/64" / No. of rivets and diameter of rivet holes 44 @ 1¼" /

Outer row rivet pitch at ends 9" / Depth of flange if manhole flanged 3 7/8" / **Steam Dome:** Material none /

Tensile strength ____ Thickness of shell ____ Description of longitudinal joint ____

Diameter of rivet holes ____ Pitch of rivets ____ Percentage of strength of joint { Plate ____ Rivets ____ }

Internal diameter ____ Working pressure by Rules ____ Thickness of crown ____ No. and diameter of stays ____

Inner radius of crown ____ Working pressure by Rules ____

How connected to shell ____ Size of doubling plate under dome ____ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell ____.

Type of Superheater none Manufacturers of { Tubes ____ Steel castings ____ }

Number of elements ____ Material of tubes ____ Internal diameter and thickness of tubes ____

Material of headers ____ Tensile strength ____ Thickness ____ Can the superheater be shut off and the boiler be worked separately ____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler ____

Area of each safety valve ____ Are the safety valves fitted with easing gear ____ Working pressure as per Rules ____ Pressure to which the safety valves are adjusted ____ Hydraulic test pressure: tubes ____, castings ____ and after assembly in place ____ Are drain cocks or valves fitted to free the superheater from water where necessary ____.

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with —.

The foregoing is a correct description,

FOR DAVID & WILLIAM HENDERSON & CO., LTD.

A. C. Gate DIRECTOR. Manufacturer.

Dates of Survey { During progress of work in shops - - } 1930 Jan 17·24·29 Feb 18·19 Mar { During erection on board vessel - - - } 5·13·18·26 Apr 1·15·29 May 5·8·15 21·26·29 June 5·6·10

Are the approved plans of boiler and superheater forwarded herewith ____ (If not state date of approval.)

Total No. of visits 21

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. Vessel not yet reported

GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.*)

The materials and workmanship are good.

The boilers have been constructed under special survey in accordance with the Rules.

The boilers will be fitted in board the vessel at Glasgow

a.c. 12/6/30

Survey Fee ... ... £27 : 6 : When applied for, 16. 6. 1930

Travelling Expenses (if any) £ ... : ... : When received, 4. 7. 1930

S. C. Davis.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 17 JUN 1930

Assigned TRANSMIT TO LONDON

See Gls. Rpt. No. 5072.1

GLASGOW 16 SEP 1930 TUE 28 OCT 1930 FRI. 7 NOV 1930